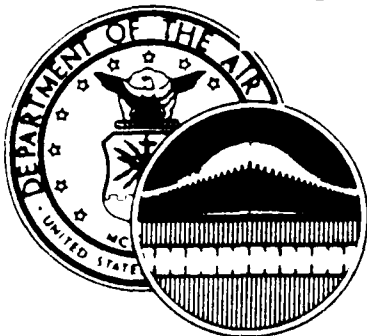


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UNITED STATES AIR FORCE

OCCUPATIONAL SURVEY REPORT

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F/FB-111 AVIONIC SYSTEMS CAREER LADDER

AFSC 452X3

AFPT 90-452-853

JULY 1990

OCCUPATIONAL ANALYSIS PROGRAM
USAF OCCUPATIONAL MEASUREMENT CENTER
AIR TRAINING COMMAND
RANDOLPH AFB, TEXAS 78150-5000

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PREFACE

This report presents the results of a detailed Air Force Occupational Survey of the F/FB-111 Avionic Systems career ladder:

- AFSC 452X3A - F/FB-111 Attack Control Systems (Formerly 326X6A)
- AFSC 452X3B - F/FB-111 Instrument and Flight Control Systems
(Formerly 326X7A)
- AFSC 452X3C - F/FB-111 Communication, Navigation, and Penetration
Aids Systems (Formerly 326X8A)
- AFSC 45273 - F/FB-111 Avionic Systems Technician (Formerly 32676,
32677, 32678)

Authority for conducting occupational surveys is contained in AFR 35-2. Computer products upon which this report is based are available for use by operations and training officials.

The survey instrument was developed by Chief Master Sergeant Anthony O'Flaherty, Inventory Development Specialist, with computer programming support furnished by Ms Olga Velez. Mr Richard G. Ramos provided administrative support. Mrs Joan T. Brooks, Occupational Analyst, analyzed the data and wrote the final report. This report has been reviewed and approved by Lieutenant Colonel Charles D. Gorman, Chief, Airman Analysis Branch, Occupational Analysis Division, USAF Occupational Measurement Center.

A Training Requirements Analysis (TRA) is also being accomplished in conjunction with this OSR. The TRA will provide a comprehensive data base in support of career ladder training decisions. The TRA consists of three sections: (a) System Overview - an overall perspective of career ladder training; (b) Task Analysis - detailed training decision data for career ladder technical tasks; and (c) Training Requirements/Recommendations - recommendations on what should be trained, when training should occur, and where training should be provided.

Copies of this report are distributed to Air Staff sections, major commands, and other interested training and management personnel. Additional copies are available upon request to the USAF Occupational Measurement Center, Attention: Chief, Occupational Analysis Division (OMY), Randolph AFB Texas, 78150-5000 (AUTOVON 487-6623).

BOBBY P. TINDELL, Colonel, USAF
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Center

SUMMARY OF RESULTS

1. Survey Coverage: The F/FB-111 Avionic Systems (AFSC 452X3A/B/C) career ladder was surveyed to obtain current task and equipment data for use in examining current training programs. Survey results are based on responses from 988 AFSC 452X3 personnel (60 percent of all assigned 3-, 5-, and 7-skill level career ladder personnel).
2. Career Ladder Structure: Overall, nine jobs were identified in the AFSC 452X3 specialty, with 75 percent falling into one of three shred-specific jobs. The remaining jobs involved Quality Assurance, Logistics Support, Debriefing, Training, and Supervision.
3. Career Ladder Progression: Personnel in the F/FB-111 Avionic Systems career ladder show a typical pattern of career ladder progression. The 3- and 5-skill-level personnel perform essentially a technical job. At the 7-skill level, personnel are first-line supervisors, performing a mixture of technical and supervisory tasks. Specialty descriptions in AFR 39-1 provide a broad and accurate overview of tasks and duties performed within the career ladder.
4. Training Analysis: The 452X3 Specialty Training Standard (STS) is generally well supported by survey data. A few elements, however, require further review due to nonsupporting data. In addition, several tasks not matched to the STS require evaluation for possible inclusion in the document. Overall, each Plan of Instruction (POI) is also well supported. However, training personnel should review the POIs, with particular emphasis placed on reviewing the tasks not referenced.
5. Job Satisfaction: Overall, 452X3A/B/C respondents are generally satisfied with their jobs. Most specialty jobs and TAFMS groups feel their talents and training are well utilized. Comparative analysis with other mission equipment maintenance personnel surveyed in 1989 shows a somewhat higher job satisfaction for the AFSC 452X3A/B/C career ladder.
6. Implications: Survey data support the current structure of AFSC 452X3. Although there are three distinct shred-specific jobs in the career ladder, Rivet Workforce objectives can be seen working at the 7-skill level with the Avionic Technician job. The Avionic Technicians integrate the maintenance abilities of personnel from all three shreds. The AFR 39-1 job descriptions are adequate for all skill levels. Most areas of the STSs and POIs are supported by survey data. Areas not supported and tasks not referenced should be reviewed by training personnel for possible inclusion in revision to this document.

OCCUPATIONAL SURVEY REPORT
F/FB-111 AVIONIC SYSTEMS CAREER LADDER
(AFSC 452X3A/B/C)

INTRODUCTION

This is a report of an occupational survey of the F/FB-111 Avionic Systems career ladder completed by the Occupational Analysis Division, USAF Occupational Measurement Center. No previous survey has been conducted for this career ladder. However, three separate Occupational Survey Reports (OSR) were published which included F/FB-111 Avionic Systems personnel prior to their AFSC conversion in April 1987. These OSRs and their date of completion are shown below:

March 1982 - 326X6 A/B/C (Attack Control Systems),
March 1982 - 326X7 A/B/C (Instrument and Flight Control Systems),
June 1982 - 326X8 A/B/C (Communication, Navigation, and Penetration Aids Systems).

The HQ ATC Aircraft and Munitions Maintenance Training Division (TTOA) requested this survey to obtain current task and equipment data for use in examining current training programs.

Background

As described in the AFR 39-1 Specialty Descriptions for AFSC 45213/33/53, 3- and 5-skill-level members analyze malfunctions, inspect, install, maintain, and troubleshoot F/FB-111 Avionic Systems at the organizational level. They also inspect, service, and perform general aircraft-handling procedures. In addition to the above, 7-skill-level members supervise organizational level maintenance activities and staff functions.

Initial 3-skill-level training for AFSC 452X3A personnel is provided in a 21-week, 2-day course at Lowry AFB CO. The first 11 weeks are spent on electronic principles (EP). The Apprentice F/FB-111 Avionic Attack Control Systems Specialist course, G3AQR45233A-000, teaches introduction to maintenance, general maintenance procedures, aircraft and avionics familiarization, attack radar system (ARS), terrain-following radar (TFR), inertial navigation system (INS), digital computer complex (DCC), mission computer complex (MCC), multi-function display (MFD), control and display system (CDS), integrated display system, multiplex data bussing (MUX BUSSING), short range attack missile (SRAM)/inertial buffer system (SIBU), doppler, radar altimeter, optical display sight system (ODSS), integrated communication navigation and identification system (ICNIS), and compact airborne video recorder (CAVR) system.

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For AFSC 45233B personnel, initial training is also provided at Lowry AFB CO in a 21-week, 1-day course. The first 11 weeks are spent on EPs. The Apprentice F/FB-111 Avionic Instrument and Flight Control Systems Specialist course, G3AQR45233B-000, teaches introduction to maintenance, general maintenance procedures, aircraft and avionics familiarization, nozzle position indicating system, pressure indicating system, fuel flow indicating systems, fuel quantity indicating system, oil quantity system, pitot static and standby instruments systems, attitude heading reference system, flight director system, G-exceedence indicating system, airborne signal data recording system, flight control and trim system, turbine temperature indicating system, tachometer systems, air data computer and primary instruments, flight control position indicator, stability augmentation/stall inhibitor system, automatic flight control system, stall warning and landings configuration caution systems, translating cowl system, and bleed systems.

Initial training for AFSC 45233C personnel is provided in a 17-week, 4-day course at Lowry AFB CO. The first 11 weeks are spent on EPs. The Apprentice F/FB-111 Avionic Communications, Navigation, and Penetration Aids Systems Specialist course, G3AQR45233C-000, teaches introduction to maintenance, general maintenance procedures, aircraft and avionics familiarization, intercommunication system, ultra high frequency (UHF) communications, high frequency (HF) communications, AFSATCOM system, automatic direction finder (ADF) system, instrument landing system (ILS), tactical air navigation system (TACAN), air-to-ground (A/G) identification friend or foe (IFF) system, radar transponder system, ICNIS, countermeasures receiver set (CRS), countermeasures dispenser set (CMDS), external countermeasures systems (PODS), and mode 4.

Entry into the career ladder currently requires an Armed Forces Vocational Aptitude Battery (ASVAB) Mechanical score of 67 and an X factor of K (70 lbs).

SURVEY METHODOLOGY

Inventory Development

The data collection instrument for this occupational survey was USAF Job Inventory AFPT 90-452-853, dated April 1989. A tentative task list was prepared after reviewing pertinent career ladder publications and directives, tasks from the previous AFSCs 326X6, 326X7, and 326X8 survey instruments, and data from the last AFSC 326X6/7/8 Occupational Survey Reports (OSRs). The preliminary task list was refined and validated through personal interviews with 33 subject-matter experts selected to cover a variety of major commands (MAJCOM) and varying F/FB-111 avionic functions at the following locations:

BASE

Lowry AFB CO

REASON FOR VISIT

Location of ATC technical training courses

Mountain Home AFB ID	F-111A and EF-111A maintenance
Cannon AFB NM	F-111D maintenance
Pease AFB NH	Aircraft Modernization Program (AMP)
Plattsburgh AFB NY	Aircraft Modernization Program (AMP)

Other personnel contacted included Air Force Military Personnel Center (AFMPC) classification personnel, functional and resource managers, the Air Force functional manager, and the HQ ATC Training Staff Officer for AFSC 452X3.

The resulting job inventory contained a comprehensive listing of 516 tasks grouped under 10 duty headings, with a background section requesting such information as grade, duty title, time in present job, time in service, job satisfaction, special experience identifier, and equipment maintained in performance of an incumbent's job.

Survey Administration

From July 1989 through January 1990, Consolidated Base Personnel Offices (CBPO) in operational units worldwide administered the inventory to all eligible DAFSC 452X3A/B/C personnel. Members eligible for the survey consisted of the total assigned population, excluding the following: (1) hospitalized personnel; (2) personnel in transition for a permanent change of station; (3) personnel retiring during the time inventories were administered to the field; and (4) personnel in their job less than 6 weeks. Participants were selected from a computer-generated mailing list obtained from personnel data tapes maintained by the Air Force Human Resources Laboratory (AFHRL).

Each individual who completed the inventory first filled in an identification and biographical information section and then checked each task performed in his or her current job. After checking all tasks performed, each individual then rated each of these tasks on a 9-point scale showing relative time spent on that task, as compared to all other tasks checked. The ratings ranged from 1 (very small amount time spent) through 5 (about average time spent) to 9 (very large amount spent).

To determine relative time spent for each task checked by a respondent, all of the incumbent's ratings are assumed to account for 100 percent of his or her time spent on the job and are summed. Each task rating is then divided by the total task ratings and multiplied by 100 to provide a relative percentage of time for each task. This procedure provides a basis for comparing tasks in terms of both percent members performing and average percent time spent.

Survey Sample

Personnel were selected to participate in this survey so as to insure an accurate representation across MAJCOMs and military paygrades. Table 1 reflects the percentage distribution, by MAJCOM, of assigned AFSC 452X3 personnel as of July 1989. The 988 respondents in the final sample represent 60 percent of the assigned AFSC 452X3 personnel in the sample. Table 2 reflects the percentage distribution by paygrade groups. As shown by both tables, the survey sample accurately reflects the overall AFSC 452X3 population.

Task Factor Administration

In addition to completing the job inventory, selected senior AFSC 452X3 personnel (generally E-6 or E-7 technicians) also completed a second booklet for either training emphasis (TE) or task difficulty (TD). The TE and TD booklets were processed separately from the job inventories. This information is used in a number of different analyses discussed in more detail within the report.

Task Difficulty (TD). Each individual completing a TD booklet was asked to rate all of the tasks on a 9-point scale (from extremely low to extremely high) as to the relative difficulty of each task in the inventory. Difficulty is defined as the length of time required by the average incumbent to learn to do the task. Task difficulty data were independently collected from 60 experienced 7-skill-level personnel stationed worldwide. Interrater agreement among these raters was acceptable. Ratings were standardized so tasks have an average difficulty rating of 5.00, with a standard deviation of 1.00. The resulting data yield essentially a rank ordering of tasks indicating the degree of difficulty for each task in the inventory.

Training Emphasis (TE). Individuals completing TE booklets were asked to rate tasks on a 10-point scale (from no training required to extremely high amount of training emphasis). Training emphasis is a rating of which tasks require emphasis in structured training for first-term personnel. Structured training is defined as training provided at resident technical schools, field training detachments (FTD), mobile training teams (MTT), formal OJT, or any other organized training method. Training emphasis data were independently collected from 80 experienced 7-skill-level personnel stationed worldwide. As with TD ratings, the interrater reliability was also acceptable. In this specialty, tasks rated high in TE have ratings of 4.25 and above, with an average rating of 2.47. As was discussed in the Task Difficulty (TD) section above, TE rating data may also be used to rank order tasks indicating those tasks which senior NCOs in the field consider the most important for the first-term airmen to know.

When used in conjunction with the primary criterion of percent members performing, TD and TE ratings can provide insight into first-term personnel training requirements. Such insights may suggest a need for lengthening or shortening portions of instruction supporting AFS entry-level jobs.

TABLE 1

AFSC 452X3 MAJCOM DISTRIBUTION

COMMAND	452X3A/B/C		452X3A		452X3B		452X3C	
	PERCENT OF ASSIGNED*	PERCENT OF SAMPLE	PERCENT OF ASSIGNED*	PERCENT OF SAMPLE	PERCENT OF ASSIGNED*	PERCENT OF SAMPLE	PERCENT OF ASSIGNED*	PERCENT OF SAMPLE
TAC	39	42	47	52	34	39	39	43
USAFE	29	30	24	24	29	35	32	35
SAC	17	18	19	19	16	19	19	17
ATC	10	6	7	2	17	3	8	2
AFSC	3	3	2	2	3	3	1	***
AFLC	***	***	***	***	1	***	***	***

Total Assigned: 1,634*

Total Eligible for Survey: 1,414**

Total in Sample: 988

Percent of Eligible in Sample: 72%

Percent of Assigned in Sample: 60%

* Assigned strength as of July 1989

** Excludes those in PCS, retirement, discharge, or hospital status, and those with less than 6 weeks on the job

*** Denotes less than 1 percent

NOTE: Columns may not add to 100 percent due to rounding

TABLE 2

PAYGRADE DISTRIBUTION OF AFSC 452X3A/B/C SURVEY SAMPLE

PAYGRADE	452X3A/B/C		45233/53A		45233/53B		45233/53C		45273	
	PCT OF ASSIGNED*	PCT OF SAMPLE	PCT OF ASSIGNED*	PCT OF SAMPLE	PCT OF ASSIGNED*	PCT OF SAMPLE	PCT OF ASSIGNED*	PCT OF SAMPLE	PCT OF ASSIGNED*	PCT OF SAMPLE
AIRMAN	26	24	23	26	38	40	34	33	0	0
E-4	30	32	40	41	31	41	38	46	2	0
E-5	26	30	34	31	28	18	26	20	13	51
E-6	12	9	3	2	3	2	1	1	53	33
E-7	6	4	0	0	0	0	0	0	31	15
E-8	**	0	0	0	0	0	0	0	1	1

* Assigned strength as of July 1989

** Denotes less than 1 percent

NOTE: Columns may not add to 100 percent due to rounding

SPECIALTY JOBS (Career Ladder Structure)

Each USAF Occupational Analysis begins with an examination of the career ladder structure. The structure of jobs within the F/FB-111 Avionic Systems career ladder was examined on the basis of similarity of tasks performed and the percent of time spent ratings provided by job incumbents, independent of other specialty background factors.

Each individual in the sample performs a set of tasks called a job. For the purpose of organizing individual jobs into similar units of work, an automated job clustering program is used. This hierarchical grouping program is a basic part of the Comprehensive Occupational Data Analysis Program (CODAP) system for job analysis. Each individual job description (all the tasks performed by that individual and the relative amount of time spent on those tasks) in the sample is compared to every other job description in terms of tasks performed and the relative amount of time spent on each task in the job inventory. The automated system is designed to locate the two job descriptions with the most similar tasks and percent time ratings and combine them to form a composite job description. In successive stages, new members are added to initial groups, or new groups are formed based on the similarity of tasks performed and similar time ratings in the individual job descriptions.

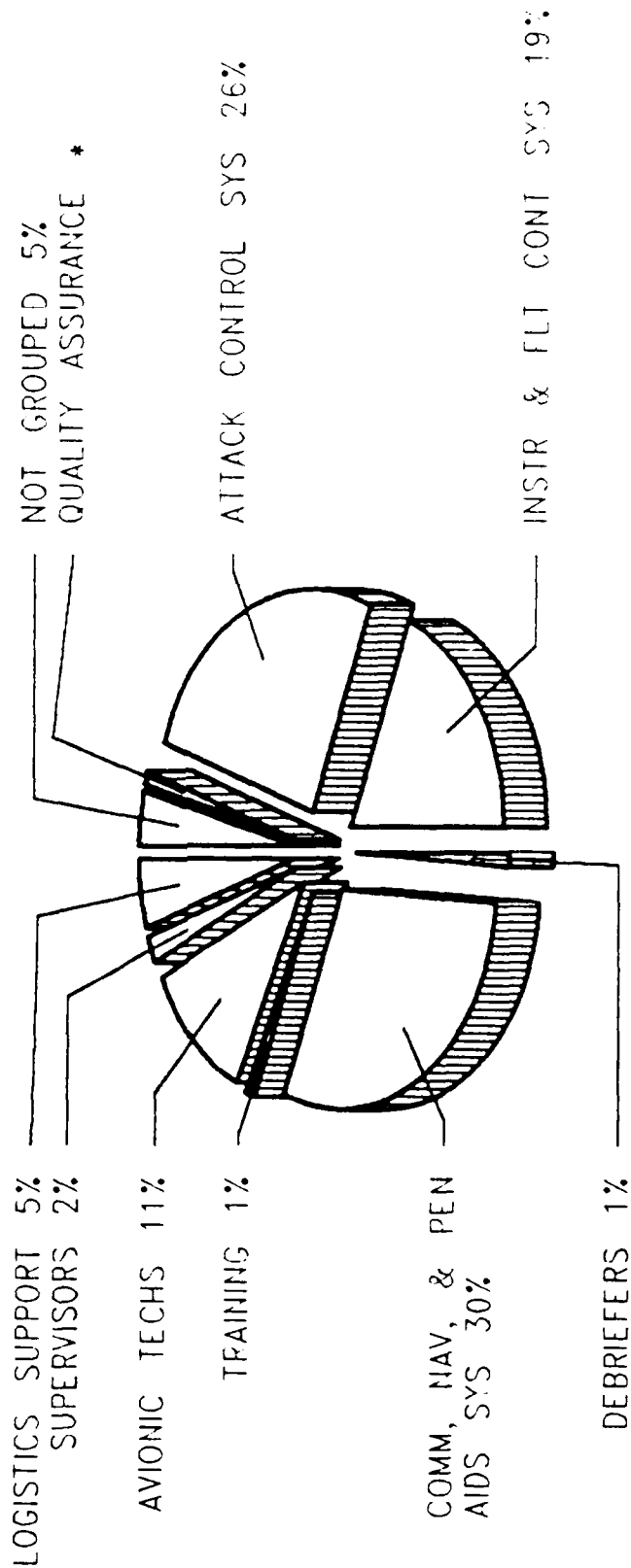
The basic identifying group used in the hierarchical job-structuring process is the job type. When there is a substantial degree of similarity between job types, they are grouped together and identified as a cluster. Specialized job types too dissimilar to fit within a cluster are labeled independent job types (IJT). The job structure resulting from this grouping process (the various jobs within the career ladder) can be used to evaluate the accuracy of career ladder documents (AFR 39-1 Specialty Descriptions and Specialty Training Standards (STS)) and to gain a better understanding of current utilization patterns. The above terminology will be used in the discussion of the AFSC 452X3 career ladder structure.

Overview of Specialty Jobs

Based on the similarity of tasks performed and the amount of time spent performing each task, six clusters and three independent job types were identified within the survey sample. The division of jobs performed by AFSC 452X3 personnel is illustrated in Figure 1, and a listing of those jobs is provided below. The relative time spent by respondents in each duty is presented in Table 3. The stage (ST) number shown beside each title is a reference to computer printed information; the number of personnel in each group (N) is also shown.

- I. ATTACK CONTROL SYSTEMS CLUSTER (ST0037, N=256)
- II. INSTRUMENT AND FLIGHT CONTROL SYSTEMS CLUSTER (ST0074, N=185)

AFSC 452X3 CAREER LADDER JOBS



* Less than 1 percent

FIGURE 1

TABLE 3

DISTRIBUTION OF DUTY TIME SPENT BY MEMBERS OF CAREER LADDER
(RELATIVE PERCENT OF JOB TIME)

DUTIES	ATTACK CONTROL SYSTEMS (ST0037, N=256)	INSTR & FLIGHT CONT SYS (ST0074, N=185)	COMM, NAV, & PEN AIDS SYSTEMS (ST0045, N=299)	AVIONIC TECHS (ST0089, N=107)	QUALITY ASSURANCE INSPECTOR (ST0078, N=5)
A ORGANIZING AND PLANNING	1	1	1	4	7
B DIRECTING AND IMPLEMENTING	2	2	2	6	12
C EVALUATING AND INSPECTING	2	1	1	5	33
D TRAINING	4	3	3	5	6
E PERFORMING GENERAL ADMINISTRATIVE OR SUPPLY TASKS	10	8	8	8	22
F PERFORMING GENERAL AIRCRAFT-HANDLING TASKS	15	14	12	10	0
G PERFORMING GENERAL AVIONIC SYSTEMS MAINTENANCE TASKS	18	10	19	9	11
H MAINTAINING ATTACK CONTROL SYSTEMS	43	1	2	11	2
I MAINTAINING INSTRUMENT AND FLIGHT CONTROL SYSTEMS	2	60	1	26	0
J MAINTAINING COMMUNICATIONS, NAVIGATION, AND PENETRATION AIDS SYSTEMS	2	1	53	15	0

TABLE 3 (CONTINUED)

DISTRIBUTION OF DUTY TIME SPENT BY MEMBERS OF CAREER LADDER
(RELATIVE PERCENT OF JOB TIME)

DUTIES	SUPV (ST0036, N=24)	LOGISTICS SUPPORT (ST0014, N=47)	DEBRIEFERS (ST0044, N=9)	TRAINING (ST0161, N=10)
A ORGANIZING AND PLANNING	20	7	6	0
B DIRECTING AND IMPLEMENTING	22	7	10	3
C EVALUATING AND INSPECTING	23	5	5	2
D TRAINING	16	3	14	91
E PERFORMING GENERAL ADMINISTRATIVE OR SUPPLY TASKS	10	77	42	0
F PERFORMING GENERAL AIRCRAFT-HANDLING TASKS	3	*	0	0
G PERFORMING GENERAL AVIONIC SYSTEMS MAINTENANCE TASKS	2	*	22	0
H MAINTAINING ATTACK CONTROL SYSTEMS	0	0	0	0
I MAINTAINING INSTRUMENT AND FLIGHT CONTROL SYSTEMS	1	0	0	0
J MAINTAINING COMMUNICATIONS, NAVIGATION, AND PENETRATION AIDS SYSTEMS	2	1	0	0

* Denotes less than 1 percent

- III. COMMUNICATION, NAVIGATION, AND PENETRATION AIDS SYSTEMS CLUSTER (ST0045, N=299)
- IV. AVIONIC TECHNICIANS CLUSTER (ST0089, N=107)
- V. QUALITY ASSURANCE INSPECTORS IJT (ST0078, N=5)
- VI. SUPERVISORS CLUSTER (ST0036, N=24)
- VII. LOGISTICS SUPPORT CLUSTER (ST0014, N=47)
- VIII. DEBRIEFERS IJT (ST0044, N=9)
- IX. TRAINING IJT (ST0161, N=10)

The respondents forming these groups account for 95 percent of the survey sample. The remaining 5 percent were performing tasks or series of tasks which did not group with any of the defined jobs. Job titles given by respondents which were representative of these personnel included Aircraft Electrician, Weapons Systems Controller, Avionics Lab Technician, and Unit Training Monitor.

Table 4 displays selected background information, such as DAFSC distributions across each group, predominant paygrades, average months in service (i.e., TAFMS), and average number of tasks performed. For example, Table 4 shows the Avionic Technicians Cluster has 107 members who have an average paygrade of E-5, and perform an average of 226 tasks.

Group Descriptions

The following paragraphs contain brief descriptions of the clusters and IJTs identified through the career ladder structure analysis. Representative tasks for all the groups are contained in Appendix A.

I. ATTACK CONTROL SYSTEMS CLUSTER (ST0037, N=256). The 256 members of this job represent 26 percent of the total survey sample. The overall mission of these members involves flightline maintenance on attack control systems. Eighty-three percent of the personnel in this job hold the "A" shred designator; however, several members indicated they also work on Instrument, and Flight Control and Communication, Navigation, and Penetration Aids avionic systems. Of the average 90 tasks performed by these incumbents, typical tasks include:

- isolating malfunctions within INS
- removing or installing ARS line replacement units (LRU)
- isolating malfunctions within TFR systems
- removing and installing TFR system LRUs
- removing and installing INS LRUs

TABLE 4

SELECTED BACKGROUND DATA FOR SPECIALTY JOBS

	ATTACK CONTROL SYSTEMS (ST0037)	INSTR & FLIGHT CONT SYS (ST0074)	COMM, NAV, & PEN AIDS SYSTEMS (ST0045)	AVIONIC TECHS (ST0089)	QUALITY ASSURANCE INSPECTORS (ST0078)	SUPERVISORS (ST0036)
NUMBER IN GROUP	256	185	299	107	5	24
PERCENT OF SAMPLE	26%	19%	30%	11%	*	2%
PERCENT IN CONUS	27%	63%	67%	66%	40%	83%
DAFSC DISTRIBUTION (PERCENT)						
45233A	30%	1%	0%	0%	0%	0%
45253A	53%	2%	1%	10%	0%	4%
45233B	0%	34%	0%	2%	0%	0%
45253B	0%	51%	0%	15%	0%	0%
45233C	0%	0%	27%	0%	0%	4%
45253C	0%	0%	59%	10%	0%	4%
45273	16%	12%	12%	61%	100%	88%
AVERAGE PAYGRADE						
AVERAGE MONTHS IN PRESENT JOB	E-4	E-4	E-4	E-5	E-5	E-7
AVERAGE TICF (MOS)	36	40	35	72	30	34
AVERAGE TAFMS (MOS)	51	48	48	103	104	112
	70	55	60	123	117	189
PERCENT IN FIRST ENLISTMENT						
PERCENT SUPERVISING	40%	57%	53%	1%	0%	0%
AVERAGE NUMBER OF TASKS PERFORMED	1%	1%	2%	6%	1%	12%
	90	115	97	226	51	71

* Denotes less than 1 percent

TABLE 4 (CONTINUED)
SELECTED BACKGROUND DATA FOR SPECIALTY JOBS

	LOGISTICS SUPPORT (ST0014)	DEBRIEFERS (ST0044)	TRAINING (ST0061)
NUMBER IN GROUP	47	9	10
PERCENT OF SAMPLE	5%	1%	1%
PERCENT IN CONUS	53%	33%	100%
DAFSC DISTRIBUTION (PERCENT)			
45233A	4%	0%	0%
45253A	9%	33%	10%
45233B	0%	0%	0%
45253B	10%	11%	20%
45233C	6%	0%	0%
45253C	43%	44%	30%
45273	28%	11%	40%
AVERAGE PAYGRADE	E-5	E-4	E-5
AVERAGE MONTHS IN PRESENT JOB	27	27	59
AVERAGE TICF (MOS)	73	64	81
AVERAGE TAFMS (MOS)	94	65	105
PERCENT IN FIRST ENLISTMENT	40%	11%	0%
PERCENT SUPERVISING	1%	1%	0%
AVERAGE NUMBER OF TASKS PERFORMED	28	10	9

* Denotes less than 1 percent

- tracing wiring, system, and interface diagrams
- isolating malfunctions within radar altimeters
- opening or closing airframe components, such as cowlings, panels, or doors
- connecting or disconnecting aircraft external cooling air units
- connecting or disconnecting aircraft external power

Members of this cluster report an average grade of E-4 and an average of nearly 6 years time in service. Forty percent are in their first enlistment, and 53 percent report holding a 5-skill level DAFSC.

II. INSTRUMENT AND FLIGHT CONTROL SYSTEMS CLUSTER (ST0074, N=185). The 185 members of this group represent 19 percent of the total survey sample. The overall mission of these members involves flightline maintenance on instrument and flight control systems. Eighty-five percent of the personnel in this job hold the "B" shred designator; however, as in the above group, some indicated they also work on the "A" - (Attack Control) and "C" - (Communications, Navigation, and Penetration Aids) shred avionics systems. Representative tasks for this group include:

- tracing wiring, system, and interface diagrams
- performing operational checks on automatic flight control systems
- performing operational checks on primary flight controls and trim systems
- isolating malfunctions within automatic flight control systems
- removing or installing automatic flight control system LRUs
- connecting or disconnecting external power
- performing operational checks of stability augmentation/stall-inhibitor systems
- isolating malfunctions within primary flight control and trim systems
- calibrating fuel quantity indicating systems

Thirty-seven percent of the group is located overseas, and 51 percent report holding a 45253B DAFSC. Overall, they have an average TAFMS of nearly 5 years and are predominately in paygrade E-4.

III. COMMUNICATION, NAVIGATION, AND PENETRATION AIDS SYSTEMS CLUSTER (ST0045, N=299). These 299 members form the largest group, representing 30 percent of the total survey sample. They primarily perform technical flightline maintenance on F/FB-111 aircraft communication, navigation, and penetration aids systems. Eighty-six percent of these specialists hold the "C" shred. However, they too work on "A" - (Attack Control) and "B" - (Instrument and Flight Control) shred avionics systems. Fifty-three percent of their

relative job time is spent maintaining communications, navigation, and penetration aids systems, and an additional 39 percent of their relative duty activity is spent in the performance of general maintenance and administrative tasks. Typical Communications, Navigation, and Penetration Aids tasks include:

- performing operational checks and BIT of AN/ALR-62 CRS
- isolating malfunctions within AN/ALR-62 CRSs
- keying mode 4 crypto systems
- performing operational checks of UHF communications systems
- isolating malfunctions within UHF communications systems
- opening and closing airframe components, such as cowlings, panels, or doors
- tracing wiring, system, and interface diagrams
- performing operational checks on intercommunications systems
- connecting or disconnecting aircraft external power

With 59 percent holding the 45253C DAFSC, 33 percent of the group are located overseas. Overall, they have an average TAFMS of 5 years and are predominately in paygrade E-4.

IV. AVIONIC TECHNICIANS CLUSTER (ST0089, N=107). This group of 107 airmen perform tasks associated with all three avionic systems. Twenty-six percent of their relative job time is spent maintaining instrument and flight control systems; 15 percent is spent maintaining communications, navigation and penetration aids systems; and an additional 11 percent is spent maintaining attack control systems. These members, by performing this broad spectrum of duties, exemplify the objectives of the Rivet Workforce program. Examples of tasks which distinguish the group include:

- tracing wiring, system, and interface diagrams
- initiating, annotating, or reviewing aircraft flight or maintenance records, such as AFTO Forms 781 series
- performing aircraft safe for maintenance checks
- connecting or disconnecting aircraft external power
- opening or closing airframe components, such as cowlings, panels, or doors
- inspecting flightline maintenance actions
- assigning maintenance and repair work
- inspecting aircraft wiring
- repairing aircraft wiring

This job is comprised largely of 7-skill-level personnel (61 percent). In addition, 10 percent hold an "A" shred designation, 17 percent hold a "B" shred designation, and 10 percent are "C" shred specialists. Approximately 34 percent of the group are located overseas. Overall, they have an average TAFMS of slightly over 10 years and are predominately in paygrade E-5.

V. QUALITY ASSURANCE INSPECTORS IJT (ST0078, N=5). All five members of this IJT indicated a job title of "Quality Assurance Inspector." Holding a 7-skill level with an average of nearly 10 years of TAFMS, they spend 33 percent of their time inspecting and evaluating. These members perform an average of 51 tasks. Representative tasks include:

- inspecting flightline maintenance actions
- investigating accidents or incidents
- evaluating maintenance and inspection report findings
- evaluating personnel for compliance with performance standards or Technical Orders
- evaluating equipment modification data
- developing quality assurance programs
- inspecting chafing problem areas

VI. SUPERVISORS CLUSTER (ST0036, N=24). The 24 members of this cluster represent the most senior level of personnel in the survey sample. The majority are in paygrade E-7, and 88 percent are qualified to the 7-skill level. With an average of nearly 16 years TAFMS, these personnel devote approximately 91 percent of their time performing supervisory, managerial, or administrative functions. These members perform an average of 71 tasks. Representative tasks performed by this group include:

- determining work priorities
- inspecting personnel for compliance with military standards
- assigning maintenance and repair work
- interpreting policies, directives, or procedures for subordinates
- counseling personnel on personal or military-related matters
- establishing performance standards for subordinates
- supervising military personnel with AFSC other than 452X3

VII. LOGISTICS SUPPORT CLUSTER (ST0014, N=47). The 47 members of this cluster are responsible for management and maintenance of supplies, tools, and equipment. Seventy-seven percent of their relative job time is spent on general administrative and supply tasks. Members perform an average of 28 tasks. Common tasks include:

- issuing tools, equipment, or supplies
- inspecting tools or equipment
- inventorying tools, such as consolidated tool kits (CTK)
- inventorying equipment or supplies
- maintaining tool cribs
- performing periodic inspections of tools or equipment
- performing routine inspections of tools or equipment
- dressing or repairing tools
- performing security checks of tool crib, hangar, or vehicles

The majority of the members hold a 5-skill level DAFSC and have slightly over 6 years in the career field. With almost 8 years of TAFMS, these members are predominately in paygrade E-5.

VIII. DEBRIEFERS IJT (ST0044, N=9). The nine members of this IJT debrief aircrews on the avionics systems of the F/FB-111 aircraft, as well as determining from the aircrew system problems after each flight. Individuals in this job may also be responsible for documenting the problems and analyzing them for trends. Personnel perform an average of 10 tasks. Representative tasks include:

- debriefing aircrews
- maintaining debriefing forms
- initiating, annotating, or reviewing aircraft flight or maintenance records, such as AFTO Forms 781 series
- initiating or completing AFTO Forms 349-3 (Maintenance Data Collection Record (Automated))
- maintaining aircraft analysis historical records
- conducting OJT
- maintaining training records
- directing development of status indicators, such as boards, graphs, or charts

Members in this group predominately hold a 5-skill level, are in paygrade E-4, and average slightly over 5 years of TAFMS.

IX. TRAINING IJT (ST0161, N=10). The 10 members of this independent job are instructors assigned to the technical training center at Lowry AFB CO. With over 6 years in the career field (average grade is E-5), group members conduct classroom training, administer and score tests, and annotate training records. By far, the majority of their time is spent training (91 percent). Typical tasks performed by this group are:

- developing resident course training materials
- conducting resident course classroom training
- administering tests
- writing test questions
- scoring tests
- evaluating progress of trainees
- counseling trainees on training progress
- annotating training records
- developing performance tests
- maintaining Technical Order publication files

Comparisons of Career Ladder Structure

Analysis of the AFSC 452X3A/B/C career ladder structure indicates that the F/FB-111 Avionic Systems specialty is somewhat diverse. This was made evident by the three distinct avionic systems clusters. These three clusters account for a total of 740 members or 75 percent of the survey sample. Each of the three avionic systems--Attack Control, Instrument and Flight Control, and Communication, Navigation, and Penetration Aids, involves the performance of unique tasks associated with their respective systems. The survey divided clearly into separate shreds, with personnel in each system performing many tasks unrelated to their sister shreds. However, one cluster contains personnel with the necessary skills and knowledge needed to maintain all three systems. The Avionic Technicians cluster meets the Rivet Workforce objectives of minimizing an aircraft maintenance dependence on several system specialties. An avionics technician integrates the maintenance abilities of personnel from all three shreds.

Comparison of Current Group Descriptions to Previous Studies

The results of the specialty job analysis were compared to three related Avionic Systems career ladders' occupational survey reports. As mentioned previously, three AFSCs (326X6A, 326X7A, and 326X8A) were merged to form the 452X3A/B/C specialty. The last occupational survey reports of AFSC 326X6A/B/C, Attack Control Systems; AFSC 326X7A/B/C, Instrument and Flight Control Systems; and AFSC 326X8A/B/C, Communication, Navigation, and Penetration Aids Systems, were completed in 1982.

Table 5 lists the major jobs identified in the 1990 survey and their equivalent jobs from the 1982 OSRs. A review of the jobs performed by the current sample indicates that most of the 1990 job groups can be matched to similar jobs performed by the "A" shred F/FB-111 Avionic Systems job groups identified in the 1982 reports. All nine jobs have an equivalent counterpart in at least two of the previous studies.

TABLE 5

JOB SPECIALTY COMPARISONS BETWEEN CURRENT AND 1982 SURVEYS

<u>CURRENT SURVEY (N=988)</u>	<u>PERCENT OF SAMPLE</u>	<u>1982 SURVEYS (N=1,554)</u>	<u>PERCENT OF SAMPLE</u>
ATTACK CONTROL SYSTEMS CLUSTER (N=256)	26	326X6A F/FB-111 TECHNICAL MAINTENANCE PERSONNEL (N=200)	13
INSTRUMENT AND FLIGHT CONTROL SYSTEMS CLUSTER (N=185)	19	326X7A F/FB-111 MAINTENANCE PERSONNEL (N=196)	13
COMM, NAV, AND PENETRATION AIDS SYSTEM CLUSTER (N=299)	30	326X8A F/FB-111 FLIGHTLINE MAINTENANCE PERSONNEL (N=169)	11
AVIONIC TECHNICIANS CLUSTER (N=11)	1	326X6A INTEGRATED AVIONICS ATTACK INSTRUMENT AND FLIGHT CONTROL SYSTEMS MAINTENANCE PERSONNEL (N=12)	1
		326X7A EF/F/FB-111 INSTRUMENT FLIGHT CONTROL & ATTACK CONTROL, AND COMM, NAV, AND PEN AIDS SYS MAINTENANCE PERSONNEL (N=6)	*
QUALITY ASSURANCE INSPECTORS CLUSTER (N=5)	*	326X6A QUALITY CONTROL PERSONNEL (N=10)	1
		326X7A QUALITY CONTROL INSPECTORS (N=6)	*
		326X8A QUALITY ASSURANCE INSPECTORS (N=6)	*

* Denotes less than 1 percent

TABLE 5 (CONTINUED)

JOB SPECIALTY COMPARISONS BETWEEN CURRENT AND 1982 SURVEY

CURRENT SURVEY (N=988)	PERCENT OF SAMPLE	1982 SURVEYS (N=1,554)	PERCENT OF SAMPLE
SUPERVISORS CLUSTER (N=24)	2	326X6A SUPERVISION AND MAINTENANCE PERSONNEL (N=29)	2
		326X7A MANAGEMENT AND SUPERVISION (N=11)	1
		326X8A SUPERVISORY PERSONNEL (N=9)	1
LOGISTICS SUPPORT CLUSTER (N=47)	5	326X6A DUE-IN-FOR-MAINTENANCE MONITORS (N=5)	*
		326X8A TOOL CRIB PERSONNEL (N=6)	*
DEBRIEFERS IJT (N=9)	1	326X6A DEBRIEFERS (N=9)	1
		326X7A ADMINISTRATIVE PERSONNEL (N=8)	1
TRAINING IJT (N=10)	1	326X6A TECHNICAL SCHOOL INSTRUCTORS (N=10)	1
		326X7A TECHNICAL SCHOOL INSTRUCTORS (N=9)	1
		326X8A TECHNICAL SCHOOL INSTRUCTORS (N=11)	1

* Denotes less than 1 percent

ANALYSIS OF DAFSC GROUPS

An analysis of DAFSC groups, in conjunction with the analysis of the career ladder structure, is an important part of each occupational survey. The DAFSC analysis identifies differences in tasks performed at the various skill levels. This information may then be used to evaluate how well career ladder documents, such as AFR 39-1 Specialty Descriptions and the STS, reflect what career ladder personnel are actually doing in the field.

A comparison of the duty and task performance between DAFSCs 45233 and 45253 indicates that, while there are some minor differences, by and large, the jobs they perform are essentially the same. Therefore, they will be discussed as a combined group in this report. Nine-skill-level and CEM code personnel in the AFSC 452XX career field were not surveyed and will not be discussed in this report.

The distribution of skill-level groups across the career ladder jobs is displayed in Table 6, while Table 7 offers another perspective by displaying the relative percent time spent on each duty across the skill-level groups.

A typical pattern of progression is noted within the AFSC 452X3 career ladder, with personnel at the lower skill levels spending most of their time on technical tasks, with more of their relative time being spent on duties involving supervisory, managerial, and administrative tasks (see Table 7, Duties A, B, C, D, and E) as they move upward to the 7-skill level. It is also obvious, however, that 7-skill-level personnel are still involved with technical task performance, as will be pointed out in the specific skill-level group discussions below.

Skill-Level Descriptions

DAFSCs 45233/45253. The 744 airmen in the 3- and 5-skill-level group (representing 75 percent of the survey sample) perform an average of 98 tasks, with 84 tasks accounting for 50 percent of their job time. As discussed in the introduction, 3- and 5-skill levels are divided into three shreds based upon the type of avionic systems maintained by each group. For instance, Table 6 illustrates that 85 percent of A-shred personnel work on maintaining attack control systems, 84 percent of B-shred personnel work on maintaining instrument and flight control systems, and 84 percent of C-shred personnel work on maintaining communications, navigation, and penetration aids systems. Tables 8A, 8B, and 8C display selected representative tasks performed by a majority of these airmen, and Tables 9A, 9B, and 9C show tasks which best differentiate 3- and 5-skill-level personnel in each shred from the 7-skill-level members.

DAFSC 45233/53A personnel perform an average of 87 tasks, with 44 tasks accounting for approximately 50 percent of their job time. Of the 249 A-shred 3- and 5-skill-level airmen, 212, or 85 percent, are members of the Attack Control Systems cluster (see Table 6). Eighty-four percent of the 188 DAFSC 45233/53B airmen are members of the Instrument and Flight Control Systems cluster. These personnel perform an average of 114 tasks, with 54 tasks

TABLE 6

DISTRIBUTION OF SKILL-LEVEL PERSONNEL
ACROSS CAREER LADDER JOBS

JOBS	DAFSC 45233/45253A (N=249)		DAFSC 45233/45253B (N=188)		DAFSC 45233/45253C (N=307)		DAFSC 45273 (N=242)	
	NUMBER	PERCENT	NUMBER	PERCENT	NUMBER	PERCENT	NUMBER	PERCENT
1 ATTACK CONTROL SYSTEMS	212	85%	0	0%	0	0%	41	17%
2 INSTRUMENT & FLIGHT CONTROL SYSTEMS	6	2%	157	84%	0	0%	22	9%
3 COMM, NAV, PEN AIDS SYSTEMS	3	1%	0	0%	257	84%	36	15%
4 AVIONIC TECHNICIANS	11	4%	18	10%	11	3%	65	27%
5 QUALITY ASSURANCE INSPECTORS	0	0%	0	0%	0	0%	1	*
6 SUPERVISORS	1	*	0	0%	2	*	21	9%
7 LOGISTICS SUPPORT	6	2%	5	2%	23	7%	13	5%
8 DEBRIEFERS	3	1%	1	*	4	1%	1	*
9 TRAINING	1	*	2	1%	2	*	4	2%
10 NOT GROUPED	6	2%	5	2%	8	2%	38	16%

* Denotes less than 1 percent

NOTE: Columns may not add to 100 percent due to rounding

TABLE 7

RELATIVE PERCENT TIME SPENT
PERFORMING DUTIES BY DAFSC GROUPS

DUTIES	DAFSC 45233/45253A (N=249)	DAFSC 45233/45253B (N=188)	DAFSC 45233/45253C (N=307)	DAFSC 45273 (N=242)
A ORGANIZING AND PLANNING	2	1	2	8
B DIRECTING AND IMPLEMENTING	2	2	2	8
C EVALUATING AND INSPECTING	2	1	1	9
D TRAINING	4	4	3	11
E PERFORMING GENERAL ADMINISTRATIVE OR SUPPLY TASKS	11	10	15	13
F PERFORMING GENERAL AIRCRAFT-HANDLING TASKS	15	14	12	7
G PERFORMING GENERAL AVIONIC SYSTEMS MAINTENANCE TASKS	17	10	15	9
H MAINTAINING ATTACK CONTROL SYSTEMS	40	1	2	9
I MAINTAINING INSTRUMENT AND FLIGHT CONTROL SYSTEMS	3	56	1	13
J MAINTAINING COMMUNICATIONS, NAVIGATION, AND PENETRATION AIDS SYSTEMS	2	1	47	12

* Denotes less than 1 percent

TABLE 8A

REPRESENTATIVE TASKS PERFORMED BY DAFSC 45233/45253A
SKILL-LEVEL PERSONNEL

TASKS	PERCENT MEMBERS PERFORMING
H343 REMOVE OR INSTALL ARS LINE REPLACEMENT UNITS (LRU)	90
H312 ISOLATE MALFUNCTIONS WITHIN TERRAIN-FOLLOWING RADAR (TFR) SYSTEMS	89
G291 TRACE WIRING, SYSTEM, AND INTERFACE DIAGRAMS	89
H297 ISOLATE MALFUNCTIONS WITHIN ATTACK RADAR SYSTEMS (ARS)	89
H358 REMOVE OR INSTALL TFR SYSTEM LRUs	88
H304 ISOLATE MALFUNCTIONS WITHIN INERTIAL NAVIGATION SYSTEMS (INS)	88
G277 INSPECT WAVEGUIDES	87
H340 PERFORM PRESSURIZATION AND LEAK CHECKS ON ARSs	87
G278 ISOLATE MALFUNCTIONS WITHIN AIRCRAFT WIRING	87
G283 REPAIR AIRCRAFT WIRING	87
H341 PERFORM PRESSURIZATION AND LEAK CHECKS ON TFRs	87
G282 REMOVE OR INSTALL WAVEGUIDES	87
F192 CONNECT OR DISCONNECT AIRCRAFT EXTERNAL COOLING AIR UNITS	86
H310 ISOLATE MALFUNCTIONS WITHIN RADAR ALTIMETERS	86
G281 PERFORM SAFETY WIRING	86
H314 ISOLATE PRESSURE LEAKS WITHIN TFRs	86
H313 ISOLATE PRESSURE LEAKS WITHIN ARSs	86
G285 REPAIR MULTIPIN CONNECTORS	86
G284 REPAIR COAXIAL CONNECTORS	86
H333 PERFORM OPERATIONAL CHECKS OF RADAR ALTIMETERS	85
H358 REMOVE OR INSTALL TFR SYSTEM LRUs	84
G274 INSPECT AIRCRAFT WIRING	84
H356 REMOVE OR INSTALL RADAR ALTIMETER SYSTEM LRUs	83
F193 CONNECT OR DISCONNECT AIRCRAFT EXTERNAL POWER	82
F209 OPEN OR CLOSE AIRFRAME COMPONENTS, SUCH AS COWLINGS, PANELS, OR DOORS	81

TABLE 8B

REPRESENTATIVE TASKS PERFORMED BY DAFSC 45233/45253B
SKILL-LEVEL PERSONNEL

TASKS	PERCENT MEMBERS PERFORMING
I402 PERFORM OPERATIONAL CHECKS ON AUTOMATIC FLIGHT CONTROL SYSTEMS	94
I420 REMOVE OR INSTALL AUTOMATIC FLIGHT CONTROL SYSTEMS LRUs	94
I410 PERFORM OPERATIONAL CHECKS OF PRIMARY FLIGHT CONTROLS AND TRIM SYSTEMS	94
I432 REMOVE OR INSTALL PITOT STATIC AND STANDBY INSTRUMENTS SYSTEM LRUs	94
G291 TRACE WIRING, SYSTEM, AND INTERFACE DIAGRAMS	93
I411 PERFORM OPERATIONAL CHECKS OF STABILITY AUGMENTATION/STALL INHIBITOR SYSTEMS	93
I433 REMOVE OR INSTALL PRIMARY FLIGHT CONTROLS AND TRIM SYSTEM LRUs	93
I369 CALIBRATE FUEL QUANTITY INDICATING SYSTEMS	93
I407 PERFORM OPERATIONAL CHECKS OF FUEL QUANTITY INDICATING SYSTEMS	93
I426 REMOVE OR INSTALL FUEL QUANTITY INDICATING SYSTEM LRUs	93
I399 PERFORM OPERATIONAL CHECKS OF AIR DATA COMPUTER AND PRIMARY INSTRUMENT SYSTEMS	92
I405 PERFORM OPERATIONAL CHECKS OF FLIGHT CONTROL POSITION INDICATING SYSTEMS	92
F193 CONNECT OR DISCONNECT AIRCRAFT EXTERNAL POWER	92
I374 ISOLATE MALFUNCTIONS WITHIN AUTOMATIC FLIGHT CONTROL SYSTEMS	92
I388 ISOLATE MALFUNCTIONS WITHIN PRIMARY FLIGHT CONTROL AND TRIM SYSTEMS	91
I387 ISOLATE MALFUNCTIONS WITHIN PITOT STATIC AND STANDBY INSTRUMENT SYSTEMS	91
I371 ISOLATE MALFUNCTIONS WITHIN AIR DATA COMPUTER AND PRIMARY INSTRUMENT SYSTEMS	91
I376 ISOLATE MALFUNCTIONS WITHIN ENGINE PRESSURE RATIO (EPR) INDICATING SYSTEMS	91
I435 REMOVE OR INSTALL STABILITY AUGMENTATION/STALL INHIBITOR SYSTEM LRUs	91
I404 PERFORM OPERATIONAL CHECKS OF EPR INDICATING SYSTEMS	91
I423 REMOVE OR INSTALL FLIGHT CONTROL POSITION INDICATING SYSTEM LRUs	91

TABLE 8C

REPRESENTATIVE TASKS PERFORMED BY DAFSC 45233/45253C
SKILL-LEVEL PERSONNEL

TASKS	PERCENT MEMBERS PERFORMING
J477 PERFORM OPERATIONAL CHECKS OF ILSs	87
J478 PERFORM OPERATIONAL CHECKS OF INTERCOMMUNICATION SYSTEMS	87
J455 ISOLATE MALFUNCTIONS WITHIN INTERCOMMUNICATIONS SYSTEMS	87
J452 ISOLATE MALFUNCTIONS WITHIN HIGH-FREQUENCY (HF) COMMUNICATIONS SYSTEMS	87
J469 PERFORM OPERATIONAL CHECKS AND BIT OF AN/ALR-62 CRSs	86
J461 ISOLATE MALFUNCTIONS WITHIN ULTRA-HIGH-FREQUENCY (UHF) COMMUNICATIONS SYSTEMS	86
J475 PERFORM OPERATIONAL CHECKS AND BIT OF TACAN SYSTEMS	86
J460 ISOLATE MALFUNCTIONS WITHIN TACTICAL AIR NAVIGATION (TACAN) SYSTEMS	86
J505 REMOVE OR INSTALL TACAN SYSTEM LRUs	86
J495 REMOVE OR INSTALL ILS LRUs	86
J496 REMOVE OR INSTALL INTERCOMMUNICATIONS SYSTEM LRUs	86
J506 REMOVE OR INSTALL UHF COMMUNICATIONS SYSTEM LRUs	85
J483 PERFORM OPERATIONAL CHECKS OF UHF COMMUNICATIONS SYSTEMS	85
J450 ISOLATE MALFUNCTIONS WITHIN COUNTERMEASURES DISPENSER SETS (CMDS)	84
J472 PERFORM OPERATIONAL CHECKS AND BIT OF HF COMMUNICATIONS SYSTEMS	84
G291 TRACE WIRING, SYSTEM, AND INTERFACE DIAGRAMS	84
J448 ISOLATE MALFUNCTIONS WITH AN/ALR-62 CRSs	84
J490 REMOVE OR INSTALL CMDS LRUs	84
J453 ISOLATE MALFUNCTIONS WITHIN INSTRUMENT LANDING SYSTEMS (ILS)	84
G289 SOLDER OR CRIMP CONNECTIONS ON AIRCRAFT WIRING	84

TABLE 9A

REPRESENTATIVE TASK DIFFERENCES BETWEEN
DAFSC 45233A/45253A AND DAFSC 45273 PERSONNEL
(PERCENT MEMBERS PERFORMING)

TASKS	DAFSC 45233/45253A (N=249)	DAFSC 45273 (N=242)	DIFFERENCE
H340 PERFORM PRESSURIZATION AND LEAK CHECKS ON ARSS	87	40	47
H341 PERFORM PRESSURIZATION AND LEAK CHECKS ON TFRs	87	40	47
H314 ISOLATE PRESSURE LEAKS WITHIN TFRs	86	39	47
H313 ISOLATE PRESSURE LEAKS WITHIN ARSS	86	41	45
H312 ISOLATE MALFUNCTIONS WITHIN TERRAIN FOLLOWING RADAR (TFR) SYSTEMS	89	45	44
H343 REMOVE OR INSTALL ARS LINE REPLACEMENT UNITS (LRU)	90	46	44
H361 TUNE TFRs	74	30	44
C84 WRITE RECOMMENDATIONS FOR AWARDS AND DECORATIONS	15	62	-47
C82 WRITE APRs	32	77	-45
B30 COUNSEL PERSONNEL ON PERSONAL OR MILITARY-RELATED MATTERS	24	68	-44
C77 INSPECT PERSONNEL FOR COMPLIANCE WITH MILITARY STANDARDS	23	66	-43
B53 SUPERVISE F/FB-111 AVIONIC COMMUNICATION, NAVIGATION, AND PENETRATION AIDS SYSTEMS SPECIALISTS (AFSC 45233C)	4	45	-41
C76 INSPECT FLIGHTLINE MAINTENANCE ACTIONS	14	55	-41
B54 SUPERVISE F/FB-111 AVIONIC INSTRUMENT AND FLIGHT CONTROL SYSTEMS SPECIALISTS (AFSC 45233B)	4	43	-39
A1 ASSIGN MAINTENANCE AND REPAIR WORK	26	65	-39
A7 DETERMINE WORK PRIORITIES	26	64	-38
A19 PLAN OR SCHEDULE WORK ASSIGNMENTS	12	49	-37

TABLE 9B

REPRESENTATIVE TASK DIFFERENCES BETWEEN
DAFSC 45233B/45253B AND DAFSC 45273 PERSONNEL
(PERCENT MEMBERS PERFORMING)

TASKS	DAFSC 45233B/45253B (N=188)	DAFSC 45273 (N=242)	DIFFERENCE
I394 ISOLATE MALFUNCTIONS WITHIN INLET TEMPERATURE INDICATING SYSTEMS	90	35	55
I376 ISOLATE MALFUNCTIONS WITHIN ENGINE PRESSURE RATIO (EPR) INDICATING SYSTEMS	91	36	55
I388 ISOLATE MALFUNCTIONS WITHIN PRIMARY FLIGHT CONTROL AND TRIM SYSTEMS	91	36	55
I432 REMOVE OR INSTALL PILOT STATIC AND STANDBY INSTRUMENTS SYSTEMS LRUS	94	39	55
I371 ISOLATE MALFUNCTIONS WITHIN AIR DATA COMPUTER AND PRIMARY INSTRUMENT SYSTEMS	91	37	54
I395 PERFORM INDICATOR SELF-TESTS OF TURBINE INLET TEMPERATURE SYSTEMS	88	34	54
C82 WRITE APRs	29	77	-48
B30 COUNSEL PERSONNEL ON PERSONAL OR MILITARY-RELATED MATTERS	20	68	-48
C84 WRITE RECOMMENDATIONS FOR AWARDS AND DECORATIONS	16	62	-46
C77 INSPECT PERSONNEL FOR COMPLIANCE WITH MILITARY STANDARDS	21	66	-45
G276 INSPECT RADIO FREQUENCY (RF) CABLES	14	57	-43
A7 DETERMINE WORK PRIORITIES	22	64	-42
B53 SUPERVISE F/FB-111 AVIONIC COMMUNICATIONS, NAVIGATION, AND PENETRATION AIDS SYSTEMS SPECIALISTS (AFSC 45233C)	4	45	-41
G277 INSPECT WAVEGUIDES	14	55	-41
G279 ISOLATE MALFUNCTIONS WITHIN RF CABLES	12	52	-40
B52 SUPERVISE F/FB-111 AVIONIC ATTACK CONTROL SYSTEMS SPECIALISTS (AFSC 45233A)	4	44	-40

TABLE 9C

REPRESENTATIVE TASK DIFFERENCES BETWEEN
DAFSC 45233C/45253C AND DAFSC 45273 PERSONNEL
(PERCENT MEMBERS PERFORMING)

TASKS	DAFSC 45233C/45253C (N=307)	DAFSC 45273 (N=242)	DIFFERENCE
G288 SEAL OR RESEAL ANTENNAS	80	31	49
J480 PERFORM OPERATIONAL CHECKS OF MODE 4 CRYPTO EQUIPMENT	83	37	46
J452 ISOLATE MALFUNCTIONS WITHIN HIGH-FREQUENCY (HF) COMMUNICATIONS SYSTEMS	87	43	44
J469 PERFORM OPERATIONAL CHECKS AND BIT OF AN/ALR-62 CRSSs	86	42	44
J462 KEY MODE 4 CRYPTO SYSTEMS	82	38	44
J470 PERFORM OPERATIONAL CHECKS AND BIT OF CMDSS	82	38	44
J455 ISOLATE MALFUNCTIONS WITHIN INTERCOMMUNICATIONS SYSTEMS	87	43	44
J448 ISOLATE MALFUNCTIONS WITHIN AN/ALR-62 CRSSs	84	40	44
J458 ISOLATE MALFUNCTIONS WITHIN MODE 4 CRYPTO EQUIPMENT	75	31	44
C82 WRITE APRs	26	77	-51
C77 INSPECT PERSONNEL FOR COMPLIANCE WITH MILITARY STANDARDS	16	66	-50
C84 WRITE RECOMMENDATIONS FOR AWARDS AND DECORATIONS	12	62	-50
B30 COUNSEL PERSONNEL ON PERSONAL OR MILITARY-RELATED MATTERS	21	68	-47
A19 PLAN AND SCHEDULE WORK ASSIGNMENTS	11	53	-42
B45 INTERPRET POLICIES, DIRECTIVES, OR PROCEDURES FOR SUBORDINATES	10	51	-41
B52 SUPERVISE F/FB-111 AVIONIC ATTACK CONTROL SYSTEMS SPECIALISTS (AFSC 45233A)	4	44	-40
C76 INSPECT FLIGHTLINE MAINTENANCE ACTIONS	15	55	-40
C67 EVALUATE PERSONNEL FOR COMPLIANCE WITH PERFORMANCE STANDARDS AND TECHNICAL ORDERS	10	49	-39
A20 PLAN AND SCHEDULE WORK PRIORITIES	10	49	-39

accounting for approximately 50 percent of their time. DAFSC 45233/53C personnel perform an average of 90 tasks, with 51 tasks accounting for approximately 50 percent of their time. Of the 307 C-shred 3- and 5-skill airmen, 257, or 84 percent, are members of the Communication, Navigation, and Penetration Aids Systems cluster.

DAFSC 45273. Seven-skill-level personnel, representing 24 percent of the survey sample, perform an average of 119 tasks, with 101 tasks accounting for 50 percent of their relative job time. Forty-nine percent of their relative job time is spent on tasks in the usual supervisory, managerial, training, and administrative duties (see Table 7). A review of Table 6 shows that 68 percent of the 7-skill-level personnel are found in the jobs that were identified as technical (Attack Control Systems, Instrument and Flight Control Systems, Communication, Navigation, Penetration Aids Systems, and Avionic Technicians). Only 9 percent grouped in the Supervisors job. Table 10 shows tasks representative of the group. While the display of tasks in Table 10 clearly shows these senior personnel are responsible for supervision in the shops, it also reflects the range and scope of the job in that relatively high percentages of the group are also performing a wide variety of day-to-day avionic systems tasks.

Summary

Career ladder progression is evident, with personnel at the 3- and 5-skill levels spending the vast majority of their job time performing technical tasks. At the 7-skill level, although members still spend almost one-half of their relative duty time on general avionic systems functions, a shift toward supervisory functions is quite clear.

ANALYSIS OF AFR 39-1 SPECIALTY DESCRIPTIONS

Survey data were compared to the AFR 39-1 Specialty Descriptions for F/FB-111 Avionic Systems Specialists and Technicians, dated 1 February 1988.

The descriptions for the 3-, 5-, and 7-skill levels were well supported by the findings of the survey. The descriptions depict the highly technical aspect of the job, as well as the increase in supervisory responsibilities previously described in the DAFSC analysis. The descriptions also capture the primary responsibilities of members in the 9 jobs identified by the job structure analysis process.

TABLE 10

REPRESENTATIVE TASKS PERFORMED BY DAFSC 45273
SKILL-LEVEL PERSONNEL

TASKS	PERCENT MEMBERS PERFORMING (N=242)
C82 WRITE APRs	77
G291 TRACE WIRING, SYSTEM, AND INTERFACE DIAGRAMS	72
D105 MAINTAIN TRAINING RECORDS	69
D93 COUNSEL TRAINEES ON TRAINING PROGRESS	69
B30 COUNSEL PERSONNEL ON PERSONAL OR MILITARY-RELATED MATTERS	68
E136 INITIATE AFTO FORMS 350(REPARABLE ITEM PROCESSING TAG)	67
D87 ANNOTATE TRAINING RECORDS	67
F209 OPEN OR CLOSE AIRFRAME COMPONENTS SUCH AS COWLINGS, PANELS, OR DOORS	67
F193 CONNECT OR DISCONNECT AIRCRAFT EXTERNAL POWER	66
C77 INSPECT PERSONNEL FOR COMPLIANCE WITH MILITARY STANDARDS	66
A1 ASSIGN MAINTENANCE AND REPAIR WORK	65
F192 CONNECT OR DISCONNECT AIRCRAFT EXTERNAL COOLING AIR UNITS	65
G274 INSPECT AIRCRAFT WIRING	64
G285 REPAIR MULTIPIN CONNECTORS	64
G281 PERFORM SAFETY WIRING	64
A7 DETERMINE WORK PRIORITIES	64
G278 ISOLATE MALFUNCTIONS WITHIN AIRCRAFT WIRING	63
G283 REPAIR AIRCRAFT WIRING	63
G280 PERFORM AIRCRAFT SAFE FOR MAINTENANCE CHECKS	63
C84 WRITE RECOMMENDATIONS FOR AWARDS AND DECORATIONS	62
G289 SOLDER OR CRIMP CONNECTIONS ON AIRCRAFT WIRING	62
G284 REPAIR COAXIAL CONNECTORS	62
G275 INSPECT CHAFING PROBLEM AREAS	61
E144 INITIATE, ANNOTATE, OR REVIEW AIRCRAFT FLIGHT OR MAINTENANCE RECORDS, SUCH AS CONSOLIDATED TOOL KITS (CTK)	61
D103 EVALUATE PROGRESS OF TRAINEES	61
D90 CONDUCT OJT	60

TRAINING ANALYSIS

Occupational survey data are one of many sources of information which can be used to assist in the development of a training program relevant to the needs of personnel in their first enlistment. Factors which may be used in evaluating training include the overall description of the job being performed by first-enlistment personnel and their overall distribution across career ladder jobs, percentages of first-job (1-24 month TAFMS) or first-enlistment (1-48 months TAFMS) members performing specific tasks or using certain equipment or materials, as well as TE and TD ratings (previously explained in the SURVEY METHODOLOGY section).

To assist specifically in the examination of the STS, technical school personnel from Lowry Technical Training Center matched job inventory tasks to appropriate sections and subsections of the STS. It was this matching upon which comparison to this document was based. A complete computer listing displaying the percent members performing tasks, TE and TD ratings for each task, along with the STS matchings, has been forwarded to the technical school for their use in further detailed reviews of training documents. A summary of this information is presented below.

First-Enlistment Personnel

In this study there are 387 members in their first enlistment (1-48 months TAFMS), representing more than one-third (39 percent) of the survey sample. The job performed by these personnel is highly technical in nature and covers the full range of F/FB-111 Avionic Systems technical activities. As displayed in Table 11, approximately 86 percent of the AFSC 452X3A personnel duty time is devoted to technical or administrative task performance. The AFSC 452X3B personnel devote 88 percent of their duty time to technical and administrative tasks and the AFSC 452X3C personnel devote 82 percent of their time to technical and administrative tasks. Distribution of these personnel across career ladder jobs is displayed in Figure 2, which shows the vast majority of first-term personnel are involved in day-to-day F/FB-111 avionic systems activities. Tables 12, 12A, 12B, and 12C display just some of the tasks performed by the various first-enlistment groups, and are intended to represent the full range of tasks performed by first-term personnel across various types of general maintenance activities.

Further indication of the technical orientation of these airmen is the variety and number of equipment and test equipment worked on or utilized by first-enlistment personnel. Tables 13A, 13B, and 13C list the equipment items worked on by 30 percent or more first-enlistment personnel in each of the shreds. Also shown for comparative purposes is the percent of 5- and 7-skill level personnel also using or operating the equipment. Similarly, test equipment used or operated by these airmen is listed in Tables 14A, 14B, and 14C, along with corresponding percentages of 5- and 7-skill levels. Examples of test equipment utilized by AFSC 452X3 personnel include analog and digital multimeters, and oscilloscopes. A full computer listing of all equipment

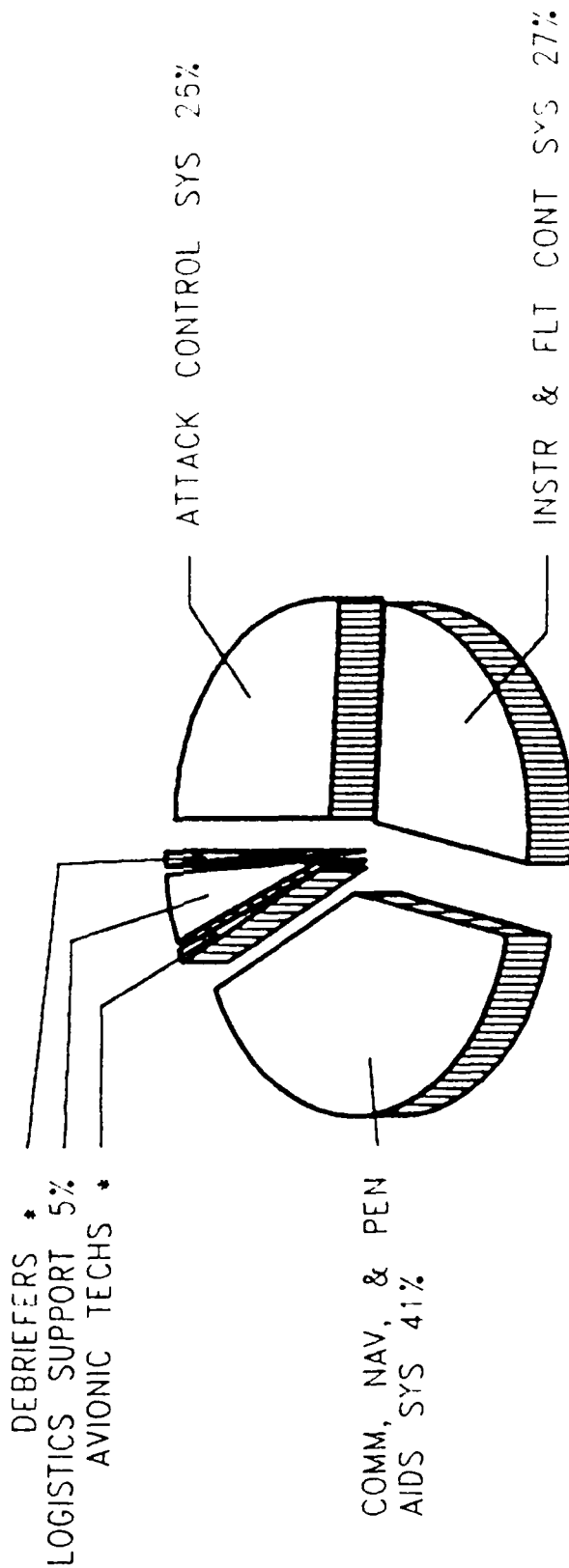
TABLE 11

RELATIVE TIME SPENT
ON DUTIES BY FIRST-ENLISTMENT PERSONNEL

DUTIES	PERCENT TIME SPENT		
	452X3A 1ST ENL (N=107)	452X3B 1ST ENL (N=108)	452X3C 1ST ENL (N=172)
A ORGANIZING AND PLANNING	*	*	1
B DIRECTING AND IMPLEMENTING	1	1	1
C EVALUATING AND INSPECTING	*	*	*
D TRAINING	2	1	1
E PERFORMING GENERAL ADMINISTRATIVE OR SUPPLY TASKS	12	9	15
F PERFORMING GENERAL AIRCRAFT-HANDLING TASKS	17	16	13
G PERFORMING GENERAL AVIONIC SYSTEMS MAINTENANCE TASKS	19	10	16
H MAINTAINING ATTACK CONTROL SYSTEMS	47	*	*
I MAINTAINING INSTRUMENT AND FLIGHT CONTROL SYSTEMS	2	61	*
J MAINTAINING COMMUNICATIONS, NAVIGATION, AND PENETRATION AIDS SYSTEMS	1	1	53

* Denotes less than 1 percent

FIRST ASSIGNMENT AFSC 452X3 CAREER LADDER JOBS



* Less than 1 percent

FIGURE 2

TABLE 12
REPRESENTATIVE TASKS PERFORMED
BY 452X3A/B/C FIRST-ENLISTMENT PERSONNEL

TASKS	PERCENT MEMBERS PERFORMING (N=387)
G291 TRACE WIRING, SYSTEM, AND INTERFACE DIAGRAMS	90
G289 SOLDER OR CRIMP CONNECTIONS ON AIRCRAFT WIRING	87
G281 PERFORM SAFETY WIRING	86
G278 ISOLATE MALFUNCTIONS WITHIN AIRCRAFT WIRING	86
G283 REPAIR AIRCRAFT WIRING	85
F192 CONNECT OR DISCONNECT AIRCRAFT EXTERNAL COOLING AIR UNITS	84
F193 CONNECT OR DISCONNECT AIRCRAFT EXTERNAL POWER	84
G274 INSPECT AIRCRAFT WIRING	84
G285 REPAIR MULTIPIN CONNECTORS	82
F209 OPEN OR CLOSE AIRFRAME COMPONENTS SUCH AS COWLING, PANELS, OR DOORS	81
G290 SPLICE AIRCRAFT WIRING	79
G284 REPAIR COAXIAL CONNECTORS	78
F271 WALK WINGS OR TAILS DURING AIRCRAFT TOWING OPERATIONS	75
E136 INITIATE AFTO FORMS 350 (REPARABLE ITEM PROCESSING TAG)	71
G280 PERFORM AIRCRAFT SAFE FOR MAINTENANCE CHECKS	69
G275 INSPECT CHAFING PROBLEM AREAS	67
G286 REPAIR RF CABLES	61
F232 PERFORM PREUSE INSPECTIONS OF MAINTENANCE STANDS	61
F196 ELECTRICALLY GROUND AIRCRAFT	60
E144 INITIATE, ANNOTATE, OR REVIEW AIRCRAFT FLIGHT OR MAINTENANCE RECORDS, SUCH AS AFTO FORMS 781 SERIES	61
G279 ISOLATE MALFUNCTIONS WITHIN RF CABLES	60
E145 INSPECT TOOLS OR EQUIPMENT	59
F235 PERFORM PREUSE INSPECTIONS OF PORTABLE LIGHTING EQUIPMENT	59
G276 INSPECT RADIO FREQUENCY (RF) CABLES	59
G277 INSPECT WAVEGUIDES	56
E147 INVENTORY TOOLS, SUCH AS CONSOLIDATED TOOL KITS (CTK)	54

TABLE 12A
REPRESENTATIVE TASKS PERFORMED
BY 452X3A FIRST-ENLISTMENT PERSONNEL

TASKS	PERCENT MEMBERS PERFORMING (N=107)
H312 ISOLATE MALFUNCTIONS WITHIN TERRAIN-FOLLOWING RADAR (TFR) SYSTEMS	93
H343 REMOVE OR INSTALL ARS LINE REPLACEMENT UNITS (LRU)	93
H297 ISOLATE MALFUNCTIONS WITHIN ATTACK RADAR SYSTEMS (ARS)	93
G291 TRACE WIRING, SYSTEM, AND INTERFACE DIAGRAMS	93
G278 ISOLATE MALFUNCTIONS WITHIN AIRCRAFT WIRING	91
G358 REMOVE OR INSTALL TFR SYSTEM LRUs	91
G284 REPAIR COAXIAL CABLES	91
H304 ISOLATE MALFUNCTIONS WITHIN INERTIAL NAVIGATION SYSTEMS (INS)	90
G283 REPAIR AIRCRAFT WIRING	90
G285 REPAIR MULTIPIN CONNECTORS	89
G282 REMOVE OR INSTALL WAVEGUIDES	89
H310 ISOLATE MALFUNCTIONS WITHIN RADAR ALTIMETERS	88
H313 ISOLATE PRESSURE LEAKS WITHIN ARSs	88
H351 REMOVE OR INSTALL INS LRUs	88
F192 CONNECT OR DISCONNECT AIRCRAFT EXTERNAL COOLING AIR UNITS	87
H341 PERFORM PRESSURIZATION AND LEAK CHECKS ON TFRs	87
G274 INSPECT AIRCRAFT WIRING	87
G281 PERFORM SAFETY WIRING	87
H338 PERFORM OPERATIONAL CHECKS OF RADAR ALTIMETERS	87
G289 SOLDER OR CRIMP CONNECTIONS ON AIRCRAFT WIRING	87
H314 ISOLATE PRESSURE LEAKS WITHIN TFRs	86
H356 REMOVE OR INSTALL RADAR ALTIMETER SYSTEM LRUs	85
H342 PHASE AND ALIGN TFRs	85

TABLE 12B
REPRESENTATIVE TASKS PERFORMED
BY 452X3B FIRST-ENLISTMENT PERSONNEL

TASKS	PERCENT MEMBERS PERFORMING (N=108)
F193 CONNECT OR DISCONNECT AIRCRAFT EXTERNAL POWER	96
I402 PERFORM OPERATIONAL CHECKS OF AUTOMATIC FLIGHT CONTROL SYSTEMS	96
I410 PERFORM OPERATIONAL CHECKS OF PRIMARY FLIGHT CONTROLS AND TRIM SYSTEMS	96
I432 REMOVE OR INSTALL PITOT STATIC AND STANDBY INSTRUMENTS SYSTEM LRUs	96
I420 REMOVE OR INSTALL AUTOMATIC FLIGHT CONTROL SYSTEM LRUs	95
I369 CALIBRATE FUEL QUANTITY INDICATING SYSTEMS	94
I433 REMOVE OR INSTALL PRIMARY FLIGHT CONTROLS AND TRIM SYSTEM LRUs	94
I407 PERFORM OPERATIONAL CHECKS OF FUEL QUANTITY INDICATING SYSTEMS	94
I426 REMOVE OR INSTALL FUEL QUANTITY INDICATING SYSTEM LRUs	94
G291 TRACE WIRING, SYSTEM, AND INTERFACE DIAGRAMS	94
I398 PERFORM OPERATIONAL AND LEAK CHECKS OF PITOT STATIC AND STANDBY INSTRUMENT SYSTEMS	94
I411 PERFORM OPERATIONAL CHECKS OF STABILITY AUGMENTATION/ STALL INHIBITOR SYSTEMS	94
I417 REMOVE OR INSTALL AIR DATA COMPUTER AND PRIMARY INSTRUMENT SYSTEM LRUs	94
I405 PERFORM OPERATIONAL CHECKS OF FLIGHT CONTROL POSITION INDICATING SYSTEMS	94
I376 ISOLATE MALFUNCTIONS WITHIN ENGINE PRESSURE RATIO (EPR) INDICATING SYSTEMS	94
I404 PERFORM OPERATIONAL CHECKS OF EPR-INDICATING SYSTEMS	94
I423 REMOVE OR INSTALL FLIGHT CONTROL POSITION INDICATING SYSTEM LRUs	94
I422 REMOVE OR INSTALL EPR PRESSURE INDICATING SYSTEM LRUs	94
I394 ISOLATE MALFUNCTIONS WITHIN TURBINE INLET TEMPERATURE INDICATING SYSTEMS	93
I399 PERFORM OPERATIONAL CHECKS OF AIR DATA COMPUTER AND TRIM SYSTEMS	93

TABLE 12C
REPRESENTATIVE TASKS PERFORMED
BY 452X3C FIRST-ENLISTMENT PERSONNEL

TASKS	PERCENT MEMBERS PERFORMING (N=172)
J477 PERFORM OPERATIONAL CHECKS OF ILSs	90
J495 REMOVE OR INSTALL ILS LRUs	90
J461 ISOLATE MALFUNCTIONS WITHIN ULTRA HIGH-FREQUENCY (UHF) COMMUNICATIONS SYSTEMS	90
J478 PERFORM OPERATIONAL CHECKS OF INTERCOMMUNICATIONS SYSTEMS	90
J469 PERFORM OPERATIONAL CHECKS AND BIT OF AN/ALR-62 CRSs	90
J455 ISOLATE MALFUNCTIONS WITHIN INTERCOMMUNICATION SYSTEMS	90
J475 PERFORM OPERATIONAL CHECKS AND BIT OF TACAN SYSTEMS	90
J452 ISOLATE MALFUNCTIONS WITHIN HIGH-FREQUENCY (HF) COMMUNICATIONS SYSTEMS	90
J460 ISOLATE MALFUNCTIONS WITHIN TACTICAL AIR NAVIGATION (TACAN) SYSTEMS	88
J505 REMOVE OR INSTALL TACAN SYSTEM LRUs	88
J453 ISOLATE MALFUNCTIONS WITHIN INSTRUMENT LANDING SYSTEMS (ILS)	88
J496 REMOVE OR INSTALL INTERCOMMUNICATIONS SYSTEM LRUs	88
J448 ISOLATE MALFUNCTIONS WITHIN AN/ALR-62 CRSs	88
J472 PERFORM OPERATIONAL CHECKS AND BIT OF HF COMMUNICATIONS SYSTEMS	88
J450 ISOLATE MALFUNCTIONS WITHIN COUNTERMEASURES DISPENSER SETS (CMDS)	88
J493 REMOVE OR INSTALL HF COMMUNICATIONS SYSTEM LRUs	88
J490 REMOVE OR INSTALL CMDS LRUs	88
J506 REMOVE OR INSTALL UHF COMMUNICATIONS SYSTEM LRUs	87
J462 KEY MODE 4 CRYPTO SYSTEMS	86
G289 SOLDER OR CRIMP CONNECTIONS ON AIRCRAFT WIRING	85
G291 TRACE WIRING, SYSTEM, AND INTERFACE DIAGRAMS	85
J483 PERFORM OPERATIONAL CHECKS OF UHF COMMUNICATIONS SYSTEMS	85

TABLE 13A

EQUIPMENT USED OR OPERATED
BY GREATER THAN 30 PERCENT OF AFSC 452X3A FIRST-ENLISTMENT PERSONNEL
(PERCENT MEMBERS RESPONDING)

<u>EQUIPMENT</u>	<u>1ST ENL 452X3A (N=107)</u>	<u>DAFSC 45253A (N=169)</u>	<u>DAFSC 45273 (N=242)</u>
EXTERNAL COOLING AIR UNIT	85	86	70
AIRCRAFT INTERPHONE	75	78	68
MAINTENANCE STAND	74	80	71
PORTABLE LIGHTING EQUIPMENT	72	77	62
GROUND HEATER AND BLOWER	60	64	51
GAS TURBINE GENERATOR/COMPRESSOR	57	64	60
AIRCRAFT RADIO	56	59	62
NITROGEN SERVICING EQUIPMENT	30	34	25

TABLE 13B

EQUIPMENT USED OR OPERATED
BY GREATER THAN 30 PERCENT OF AFSC 452X3B FIRST-ENLISTMENT PERSONNEL
(PERCENT MEMBERS RESPONDING)

<u>EQUIPMENT</u>	<u>1ST ENL 452X3B (N=108)</u>	<u>DAFSC 45253B (N=120)</u>	<u>DAFSC 45273 (N=242)</u>
PORTABLE LIGHTING EQUIPMENT	90	85	62
MAINTENANCE STAND	84	83	71
AIRCRAFT INTERPHONE	81	77	68
PORTABLE HYDRAULIC TEST STAND	77	81	37
GROUND HEATER AND BLOWER	69	72	51
EXTERNAL COOLING AIR UNIT	58	67	70
GAS TURBINE GENERATOR/COMPRESSOR	55	63	60
PORTABLE GENERATOR	54	47	31
AIRCRAFT RADIO	43	55	62
HYDRAULIC SERVICING CART	42	38	15
AIRCRAFT JACK	37	46	24
CANOPY SYSTEM	31	43	29

TABLE 13C

EQUIPMENT USED OR OPERATED
 BY GREATER THAN 30 PERCENT OF AFSC 452X3C FIRST-ENLISTMENT PERSONNEL
 (PERCENT MEMBERS RESPONDING)

<u>EQUIPMENT</u>	<u>1ST ENL 452X3C (N=172)</u>	<u>DAFSC 45253C (N=220)</u>	<u>DAFSC 45273 (N=242)</u>
AIRCRAFT RADIO	87	84	62
AIRCRAFT INTERPHONE	85	84	68
PORTABLE LIGHTING EQUIPMENT	83	79	62
EXTERNAL COOLING AIR UNIT	81	80	70
MAINTENANCE STAND	81	80	71
GAS TURBINE GENERATOR/COMPRESSOR	57	57	60
GROUND HEATER AND BLOWER	56	58	51
PORTABLE GENERATOR	35	39	31

TABLE 14A

TEST EQUIPMENT WORKED ON
BY GREATER THAN 30 PERCENT OF AFSC 452X3A FIRST-ENLISTMENT PERSONNEL
(PERCENT MEMBERS RESPONDING)

<u>TEST EQUIPMENT</u>	<u>1ST ENL 452X3A (N=107)</u>	<u>DAFSC 45253A (N=169)</u>	<u>DAFSC 45273 (N=242)</u>
MULTIMETER, DIGITAL	95	93	75
TEST SET, FOL RAD SYS (TFRS)	85	80	44
MULTIMETER, ANALOG	74	81	68
BOX, INTERFACE LOWER MUX UNIT (LMU)	72	64	28
BOX, INTER COMB ALTD RADAR ALTM (CARA)	71	68	37
TESTER, WAVEGUIDE PRESSURE	68	64	41
OSCILLOSCOPE	64	58	38
BOX, BREAKOUT	61	66	41
REFLECTOMETER (TDR)	60	68	55
BORESIGHT	59	54	45
TESTER, ANTENNA HAT (TD 845/APM-181A)	58	53	24
ULTRASONIC LEAK DETECTOR	57	65	44
HEAT GUN, HT-900	56	67	55
OPTICAL DISPLAY SIGHT (ODS)	55	55	32
MISSION DATA LOADER	51	39	37
FLIGHTLINE COMPUTER LOADER (FLCL)	49	38	32
TEST SET, DIGITAL FLIGHTLINE TESTER (DFLT)	49	34	30
TEST SET, SUBSYSTEM TIE-IN	48	51	38

TABLE 14B

TEST EQUIPMENT WORKED ON
BY GREATER THAN 30 PERCENT OF AFSC 452X3B FIRST-ENLISTMENT PERSONNEL
(PERCENT MEMBERS RESPONDING)

<u>TEST EQUIPMENT</u>	<u>1ST ENL 452X3B (N=108)</u>	<u>DAFSC 45253B (N=120)</u>	<u>DAFSC 45273 (N=242)</u>
ANGLE-OF-ATTACK PROBE	95	91	46
MULTIMETER, DIGITAL	95	93	75
TESTER, FUEL QUANTITY	92	92	47
TTU-205 D/F (DIGITAL)	91	88	49
MULTIMETER, ANALOG	89	88	68
BORESIGHT	85	88	45
TTU-205 C/E	83	81	45
TEST SET, AUX FLT REF SYS (AFRS)	72	73	30
TEST SET, AIR SIG DATA REC SYS (SLUMP)	69	70	26
CALIBRATOR, COMPASS	66	69	29
HEAT GUN, HT-900	49	59	55
ULTRASONIC LEAK DETECTOR	39	51	44
OSCILLOSCOPE	35	40	38

TABLE 14C

TEST EQUIPMENT WORKED ON
 BY GREATER THAN 30 PERCENT OF AFSC 452X3C FIRST-ENLISTMENT PERSONNEL
 (PERCENT MEMBERS RESPONDING)

<u>TEST EQUIPMENT</u>	<u>1ST ENL 452X3C (N=172)</u>	<u>DAFSC 45253C (N=220)</u>	<u>DAFSC 45273 (N=242)</u>
TEST SET, IFF TRANSPONDER	90	87	50
TEST SET, TACAN (AN/ARM-184)	90	86	52
MULTIMETER, DIGITAL	88	87	75
TEST SET, INSTRUMENT LANDING SYS (LRU)	87	84	54
THRU-LINE WATT METER	77	79	50
MULTIMETER, ANALOG	77	79	68
SIMULATOR, DISPENSE SET (AN/ALE-28)	66	67	31
TEST SET, BEACON TRANSPONDER	49	42	22
TESTER RADIO FREQ (RT) (AN/USM-427)	49	50	24
REFLECTOMETER	48	62	55
HEAT GUN, HT-900	46	55	55
OSCILLOSCOPE	41	42	38
TESTER MICRO IN DIAG ANAL SYS (MIDAS)	41	40	24
TESTER WAVEGUIDE PRESSURE	32	35	41

items and associated percent members responding is supplied in the Training Extract and should be used by training specialists to determine which types of equipment should be emphasized for first-term training.

Training Emphasis and Task Difficulty Data

Training emphasis (TE) and task difficulty (TD) data are secondary factors that can assist technical school personnel in deciding what tasks should be emphasized in entry-level training. These ratings, based on the judgments of senior career ladder NCOs working at operational units in the field, are collected to provide training personnel with a rank-ordering of those tasks considered important for first-term airman training (TE) (see Table 15 for the top rated tasks), along with a measure of the difficulty of those tasks (TD) (see the highest rated tasks presented in Table 16). When combined with data on the percentages of first-enlistment personnel performing tasks, comparisons can be made to determine if training adjustments are necessary. For example, tasks receiving high ratings on both task factors, accompanied by moderate to high percentages performing, may warrant resident training. Those tasks receiving high task factor ratings, but low percentages performing, may be more appropriately planned for OJT programs within the career ladder. Low task factor ratings may highlight tasks best omitted from training for first-term personnel, but this decision must be weighed against percentages of personnel performing the tasks, command concerns, and criticality of the tasks.

To help in this determination, an Automated Training Indicator (ATI) is computed for each task in the inventory. ATI combines first-enlistment percent members performing, TE, and TD data to compute training decisions based on ATCR 52-22, Atch 1. The computed ATI is numbered 1 to 18, with an 18 being the highest level of training indicated. An ATI of 8 or less leads to a training decision of OJT only. To illustrate how the ATI is computed, if a task has received high TE and TD ratings, and also has a high percentage of first-term members performing, then a high rating is assigned to the task. With a high ATI rating, strong recommendations can be made to emphasize training the task in a resident training course.

Various lists of tasks, accompanied by TE and TD ratings, are contained in the TRAINING EXTRACT package and should be reviewed in detail by technical school personnel. (For a more detailed explanation of TE and TD ratings, see Task Factor Administration in the SURVEY METHODOLOGY section of this report.)

Specialty Training Standard (STS)

A comprehensive review of STS 452X3 was made by comparing survey data to STS elements. STS elements with performance objectives were reviewed in terms of training emphasis, task difficulty, and percent members performing information as stipulated in ATCR 52-22, dated 17 February 1989. STS paragraphs containing general knowledge information, subject-matter knowledge requirements, or supervisory responsibilities were not reviewed. Typically, tasks performed by 20 percent or more of personnel in appropriate experience or skill-level groups, such as first-enlistment (1-48 months TAFMS), and 5- and 7-skill-level

TABLE 15

TASKS RATED HIGHEST IN TRAINING EMPHASIS (TE)
452X3A/B/C

TASKS	TNG EMP*	PERCENT MEMBERS			TASK DIF**
		1ST ENL/A (N=107)	1ST ENL/B (N=108)	1ST ENL/C (N=172)	
G291 TRACE WIRING, SYSTEM, AND INTERFACE DIAGRAMS	7.20	93	94	85	6.64
G280 PERFORM AIRCRAFT SAFE FOR MAINTENANCE CHECKS	6.94	73	62	70	4.59
G285 REPAIR MULTIPIN CONNECTORS	6.74	89	70	84	6.45
G283 REPAIR AIRCRAFT WIRING	6.67	90	83	83	5.96
G278 ISOLATE MALFUNCTIONS WITHIN AIRCRAFT WIRING	6.61	91	84	83	7.33
G284 REPAIR COAXIAL CONNECTORS	6.61	91	57	84	6.76
G289 SOLDER OR CRIMP CONNECTORS ON AIRCRAFT WIRING	6.51	87	91	85	5.37
G286 REPAIR RF CABLES	6.22	81	8	82	6.59
G290 SPLICE AIRCRAFT WIRING	6.15	81	86	74	5.33
G279 ISOLATE MALFUNCTIONS WITHIN RF CABLES	6.14	81	8	78	7.24
G274 INSPECT AIRCRAFT WIRING	5.79	87	89	78	5.44
H312 ISOLATE MALFUNCTIONS WITHIN TERRAIN-FOLLOWING RADAR (TFR) SYSTEMS					
G275 INSPECT CHAFING PROBLEM AREAS	5.76	93	10	0	7.30
H331 PERFORM OPERATIONAL CHECKS AND BIT OF TFRs	5.74	69	66	66	5.72
F193 CONNECT OR DISCONNECT AIRCRAFT EXTERNAL POWER	5.64	78	0	1	5.73
G276 INSPECT RADIO FREQUENCY (RF) CABLES	5.55	82	96	78	3.24
G281 PERFORM SAFETY WIRING	5.54	70	9	83	5.60
H304 ISOLATE MALFUNCTIONS WITHIN INERTIAL NAVIGATION SYSTEMS (INS)	5.54	87	86	84	4.29
H328 PERFORM OPERATIONAL CHECKS AND BIT OF INSs	5.52	90	5	1	6.10
G277 INSPECT WAVEGUIDES	5.47	79	2	1	5.22
F192 CONNECT OR DISCONNECT AIRCRAFT EXTERNAL COOLING AIR UNITS	5.46	90	8	65	5.63
H297 ISOLATE MALFUNCTIONS WITHIN ATTACK RADAR SYSTEMS (ARS)	5.45	87	83	83	3.66
H325 PERFORM OPERATIONAL CHECKS AND BIT OF ARSs	5.38	93	1	0	6.78
E136 INITIATE AFTO FORMS 350 (REPARABLE ITEM PROCESSING TAG)	5.34	78	0	2	5.20
H310 ISOLATE MALFUNCTIONS WITHIN RADAR ALTIMETERS	5.30	66	70	74	3.94
H338 PERFORM OPERATIONAL CHECKS OF RADAR ALTIMETERS	5.29	88	0	0	5.47
	5.27	87	0	1	4.56

* Training Emphasis has an average of 2.47 and a standard deviation of 1.78 (High TE = 4.25)

** Average TD Rating is 5.00, and the standard deviation is 1.00

TABLE 16

TASKS RATED HIGHEST IN TASK DIFFICULTY (TD)

TASKS	TASK DIF**	PERCENT MEMBERS PERFORMING			TNG EMP*
		1-48 TAFMS ALL SHREDS (N=387)	45253 ALL SHREDS (N=509)	45273 (N=242)	
A13 DRAFT BUDGET REQUIREMENTS	8.20	1	2	6	.16
G287 REPAIR TRIAXIAL CONNECTORS	7.65	30	27	20	4.47
G278 ISOLATE MALFUNCTIONS WITHIN AIRCRAFT WIRING	7.33	86	83	63	6.61
H312 ISOLATE MALFUNCTIONS WITHIN TERRAIN-FOLLOWING RADAR (TFR) SYSTEMS	7.30	29	38	45	5.76
A14 ESTABLISH ORGANIZATIONAL POLICIES	7.27	1	2	14	.16
G279 ISOLATE MALFUNCTIONS WITHIN RF CABLES	7.24	60	62	52	6.14
A8 DEVELOP COST-REDUCTION PROGRAMS	7.23	1	2	10	.19
I381 ISOLATE MALFUNCTIONS WITHIN FUEL QUANTITY INDICATING SYSTEMS	7.21	26	28	38	4.80
A12 DEVELOP SELF-INSPECTION PROGRAMS	7.19	2	5	23	.39
I396 PERFORM MAGNETIC SURVEYS	7.17	12	14	18	3.19
I374 ISOLATE MALFUNCTIONS WITHIN AUTOMATIC FLIGHT CONTROL SYSTEMS	7.13	26	29	38	4.96
I441 SWING AND MAKE COMPENSATION ADJUSTMENTS OF ATTITUDE HEADING REFERENCE AND INSTRUMENT SYSTEMS	7.05	21	26	29	4.49
C84 WRITE RECOMMENDATIONS FOR AWARDS AND DECORATIONS	6.99	1	19	62	2.13
B32 DIRECT FLIGHTLINE MAINTENANCE ACTIVITIES	6.93	2	16	43	.77
A11 DEVELOP QUALITY ASSURANCE PROGRAMS	6.92	1	1	12	.35
H359 SWING AND MAKE COMPENSATION ADJUSTMENTS OF INSS	6.89	18	24	24	4.13
I390 ISOLATE MALFUNCTIONS WITHIN STABILITY AUGMENTATION/ STALL INHIBITOR SYSTEMS	6.81	26	28	36	4.71
H297 ISOLATE MALFUNCTIONS WITHIN ATTACK RADAR SYSTEMS (ARS)	6.78	26	37	46	5.38
C59 EVALUATE BUDGET REQUIREMENTS	6.78	1	1	5	.15

* Training Emphasis has an average of 2.47 and a standard deviation of 1.78 (High TE = 4.25)

** Average TD Rating is 5.00, and the standard deviation is 1.00

groups, should be considered for inclusion in the STS. Likewise, tasks with less than 20 percent performing in all of these groups should be considered for deletion from the STS.

STS paragraphs containing performance information were reviewed. In looking at paragraphs matched with survey tasks, data generally support the significant paragraphs or subparagraphs. A number of STS items, however, did not meet the minimum 20 percent performing standard (see Table 17). For a complete listing of unsupported STS items, see Appendix B. These unsupported paragraphs deal with Technical Publications (4), Supervision (7), Maintenance Inspection Systems and Forms (10), General Aircraft Tasks (11), Ancillary Common Tasks (12), and Data Link Systems (30). Training personnel and subject-matter experts should review these particular areas to determine if inclusion of these areas in future revisions to the STS is warranted.

Tasks not matched to any element of the STS are listed at the end of the STS computer listing. These were reviewed to determine if there were any tasks concentrated around any particular functions or jobs. There were 146 tasks not referenced to the STS. One hundred and thirteen unreferenced tasks are managerial or supervisory in nature, and are normally not matched to an STS. Examples of technical tasks performed by 20 percent or more respondents of the STS target groups, but which are not referenced to any STS element, are displayed in Tables 18A, 18B, and 18C. Training personnel and subject-matter experts should review these and other unreferenced tasks to determine if inclusion in the STS is needed.

Plans of Instruction (POI)

Based on assistance from technical school subject-matter specialists in matching job inventory tasks to POI G3AQR45233A-000, dated August 1989, POI G3AQR45233B-000, dated September 1989, and POI G3AQR45233C-000, dated June 1989, occupational survey data were matched to related training objectives. A similar method to that of the STS analysis was employed to review the POIs. The specific data examined included percent members performing data for first-enlistment (1-48 months TAFMS) personnel, TE, and TD ratings. ATI ratings for each task were also used.

POI blocks, units of instruction, and criterion objectives were compared against the standard set forth in Attachment 1, ATCR 52-22, dated 17 February 1989 (30 percent or more of the criterion first-enlistment group performing tasks trained, along with sufficiently high TE and TD ratings on those tasks). Per this guidance, tasks trained in the course which do not meet these criteria should be considered for elimination from the formal course if not justified on some other acceptable basis.

Since much of the course is knowledge based, only a limited number of POI units of instruction or criterion objectives were matched. POI G3AQR45233A had 17 objectives matched to task items and all matched knowledge and performance level objectives had 30 percent or more of AFSC 45233A first-enlistment personnel performing related tasks. POI G3AQR45233B had 25 objectives matched to task items, and all were supported. All matched knowledge and performance

TABLE 17

EXAMPLES OF AFSC 452X3 STS ITEMS
NOT SUPPORTED BY OSR DATA

STS REFERENCE/TASKS	STS PROF CODE	PERCENT MEMBERS PERFORMING						
		1ST ENL/A (N=107)	5-SKILL LEVEL/A (N=169)	1ST ENL/B (N=108)	5-SKILL LEVEL/B (N=120)	1ST ENL/C (N=172)	5-SKILL LEVEL/C (N=220)	7-SKILL LEVEL (N=242)
4e REPORT SOFTWARE DEFICIENCIES	- -							
E180 REPORT AIRCRAFT SOFTWARE DEFICIENCIES		3	3	3	3	9	8	9
E181 REPORT SOFTWARE DEFICIENCIES, OTHER THAN AIRCRAFT SOFTWARE		2	2	0	0	1	1	2
11f(5) PERFORM GROUND OPERATION OF ENGINE	- -							
F215 PERFORM GROUND OPERATION OF AIRCRAFT MOTORING ENGINES		2	2	5	5	1	1	2
11g(6) CLASSIFY FUEL LEAKS	- -							
F197 IDENTIFY OR CLASSIFY AIRCRAFT FUEL LEAKS		8	12	6	16	3	7	10
30c PERFORM OPERATIONAL CHECK	- -							
H326 PERFORM OPERATIONAL CHECKS AND BIT OF DATA LINK SYSTEMS		6	5	0	1	1	1	4

TABLE 18A

EXAMPLES OF TECHNICAL TASKS PERFORMED BY 20 PERCENT OR MORE 452X3A
GROUP MEMBERS AND NOT REFERENCED TO THE STS

TASKS	PERCENT MEMBERS PERFORMING				TNG EMP*	TASK DIF**
	1ST ENL/A (N=107)	DAFSC 45253A (N=169)	DAFSC 45273 (N=242)			
F209 OPEN OR CLOSE AIRFRAME COMPONENTS, SUCH AS COWLINGS, PANELS, OR DOORS	84	78	67		4.97	3.66
G289 SOLDER OR CRIMP CONNECTIONS ON AIRCRAFT WIRING	87	86	62		6.51	5.37
G288 SEAL OR RESEAL ANTENNAS	35	32	31		3.80	3.96
J442 ADJUST COUNTERMEASURES RECEIVER SYSTEMS (CRS)	1	8	25		2.97	4.94

* Training Emphasis has an average of 2.47 and a standard deviation of 1.78 (High TE = 4.25)

** Average TD Rating is 5.00, and the standard deviation is 1.00

TABLE 18B

EXAMPLES OF TECHNICAL TASKS PERFORMED BY 20 PERCENT OR MORE 452X3B
GROUP MEMBERS AND NOT REFERENCED TO THE STS

TASKS	PERCENT MEMBERS PERFORMING				TNG EMP*	TASK DIF**
	1ST ENL/B (N=108)	DAFSC 45253B (N=120)	DAFSC 45273 (N=242)			
F209 OPEN OR CLOSE AIRFRAME COMPONENTS, SUCH AS COWLINGS, PANELS, OR DOORS	91	86	67		4.97	3.66
G289 SOLDER OR CRIMP CONNECTIONS ON AIRCRAFT WIRING	91	87	62		6.51	5.37
I363 ADJUST AIRBORNE SIGNAL DATA RECORDING SYSTEMS	62	62	19		2.66	5.27
G288 SEAL OR RESEAL ANTENNAS	6	9	31		3.80	3.96
J462 LOAD AND UNLOAD COUNTERMEASURES SET FORCE EJECTORS	1	3	24		2.97	4.94

* Training Emphasis has an average of 2.47 and a standard deviation of 1.78 (High TE = 4.25)

** Average TD Rating is 5.00, and the standard deviation is 1.00

TABLE 18C

EXAMPLES OF TECHNICAL TASKS PERFORMED BY 20 PERCENT OR MORE 452X3C
GROUP MEMBERS AND NOT REFERENCED TO THE STS

TASKS	PERCENT MEMBERS PERFORMING				TNG EMP*	TASK DIF**
	1ST ENL/C (N=172)	DAFSC 45253C (N=220)	DAFSC 45273 (N=242)			
F209 OPEN OR CLOSE AIRFRAME COMPONENTS, SUCH AS COWLINGS, PANELS, OR DOORS	74	73	67		4.97	3.66
G289 SOLDER OR CRIMP CONNECTIONS ON AIRCRAFT WIRING	85	82	62		6.51	5.37
G288 SEAL OR RESEAL ANTENNAS	84	78	31		3.80	3.96
J442 ADJUST COUNTERMEASURES RECEIVER SYSTEMS (CRS)	67	59	25		3.72	4.68
J463 LOAD AND UNLOAD COUNTERMEASURES SET FORCE EJECTORS	65	52	24		2.97	4.94

* Training Emphasis has an average of 2.47 and a standard deviation of 1.78 (High TE = 4.25)

** Average TD Rating is 5.00, and the standard deviation is 1.00

level objectives had 30 percent or more of AFSC 45233B first-enlistment personnel performing related tasks. POI G3AQR45233C had 17 objectives matched to task items and all were supported. All matched knowledge and performance level objectives had 30 percent or more of AFSC 45233C first-enlistment personnel performing related tasks.

Overall, each POI is well supported. However, one must keep in mind that this assessment is based on a limited number of course objectives reviewed against survey data. Training personnel are encouraged to perform a thorough review of the computer printouts for the POIs, with particular emphasis placed on reviewing the tasks not referenced located in the Training Extracts, to determine if new areas should be added to the basic course, or if existing areas could be fine tuned.

Electronic Principles (EP)

The Electronic Fundamentals paragraph of the STS and the EPs taught in the basic course can be examined using data from the EP Inventory (EPI). The EPI is a knowledge-based inventory containing 712 questions in 39 electronics-related subject areas. It identifies the range of EP personnel must understand to perform any electronics-related job. Tables 19A, 19B, and 19C list the electronic areas where 50 percent or more AFSC 45253 airmen responded "yes" to performing these functions in their job. These data can be useful to subject-matter experts when evaluating those portions of the STS concerning electronics fundamentals or principles.

JOB SATISFACTION ANALYSIS

An examination of the job satisfaction indicators can give career ladder managers a better understanding of some of the factors which may affect the job performance of airmen in the career ladder. Attitude questions covering job interest, perceived utilization of talents and training, sense of accomplishment from work, and reenlistment intentions were included in the survey booklet to provide indications of job satisfaction. The responses of the current survey sample were then analyzed by making several comparisons: (1) among TAFMS groups of the 452X3 career ladder and a comparative sample of personnel from other Mission Equipment Maintenance specialists surveyed in 1989 (AFSCs 362X4, 411X2A, 454X0A/B, 451X4), (2) between current and previous survey TAFMS groups, and (3) across specialty groups identified in the SPECIALTY JOBS section of the report.

First-enlistment (1-48 months TAFMS), second-enlistment (49-96 months TAFMS), and career (97+ months TAFMS) group data for each shred are listed in Tables 20A, 20B, and 20C and are compared to corresponding enlistment groups from other Mission Equipment Maintenance AFSCs surveyed during the previous calendar year. These data give a relative measure of how the job satisfaction of AFSC 452X3 personnel compares with that of other similar Air Force specialties. Generally, first- and second-enlistment groups of the DAFSC 452X3

TABLE 19A

ELECTRONICS PRINCIPLES USED BY 50 PERCENT
OR MORE OF DAFSC 45253A PERSONNEL

DIRECT/ALTERNATING CURRENT
ELECTRO/MECHANICAL DEVICES
SOLID-STATE CIRCUITS AND DEVICES
SOLDERING OR SOLDERLESS CONNECTIONS
MULTIMETERS
TEST EQUIPMENT
POWER SUPPLY CIRCUITS
COMPUTERS
CONNECTIONS (TRANSMISSION LINES AND WAVESHAPING CIRCUITS)
ANTENNAS

TABLE 19B

ELECTRONICS PRINCIPLES USED BY 50 PERCENT
OR MORE OF DAFSC 45253B PERSONNEL

DIRECT, ALTERNATING CURRENT
ELECTRO/MECHANICAL DEVICES
SOLID-STATE CIRCUITS AND DEVICES
SOLDERING OR SOLDERLESS CONNECTIONS
MULTIMETERS
TEST EQUIPMENT
POWER SUPPLY CIRCUITS
RADIO FREQUENCY MEASUREMENTS

TABLE 19C

ELECTRONICS PRINCIPLES USED BY 50 PERCENT
OR MORE OF DAFSC 45253C PERSONNEL

DIRECT/ALTERNATING CURRENT
ELECTRO/MECHANICAL DEVICES
SOLID-STATE CIRCUITS AND DEVICES
SOLDERING OR SOLDERLESS CONNECTIONS
MULTIMETERS
TEST EQUIPMENT
POWER SUPPLY CIRCUITS
CONNECTIONS (TRANSMISSION LINES AND WAVESHAPING CIRCUITS)
TRANSMITTERS AND RECEIVERS
ANTENNAS
MICROPHONES AND SPEAKERS

TABLE 20A

COMPARISON OF TAFMS GROUP JOB SATISFACTION INDICATORS
(PERCENT MEMBERS PERFORMING)

	1-48 MOS TAFMS		49-96 MOS TAFMS		97+ MOS TAFMS	
	1989		1989		1989	
	452X3A (N=107)	COMP SAMPLE (N=2,658)	452X3A (N=97)	COMP SAMPLE (N=1,930)	452X3A/B/C (N=309)	COMP SAMPLE (N=2,575)
<u>EXPRESSED JOB INTEREST:</u>						
INTERESTING	82	76	82	75	74	77
SO-SO	13	15	10	16	17	14
DULL	6	8	7	8	8	8
<u>PERCEIVED UTILIZATION OF TALENTS:</u>						
FAIRLY WELL TO PERFECTLY	88	84	88	86	80	84
LITTLE OR NOT AT ALL	12	15	11	14	20	15
<u>PERCEIVED UTILIZATION OF TRAINING:</u>						
FAIRLY WELL TO PERFECTLY	89	88	88	83	79	82
LITTLE OR NOT AT ALL	10	12	12	16	21	18
<u>SENSE OF ACCOMPLISHMENT FROM WORK:</u>						
SATISFIED	73	76	74	75	65	74
NEUTRAL	15	14	13	12	9	11
DISSATISFIED	10	9	12	11	26	14
<u>REENLISTMENT INTENTIONS:</u>						
WILL/PROBABLY WILL REENLIST	49	61	56	72	74	75
WILL NOT/PROBABLY WILL NOT REENLIST	51	37	44	26	17	10
WILL RETIRE	0	2	0	1	9	14

NOTE: Columns may not add to 100 percent due to nonresponse and rounding
 Comparative sample is composed of all Mission Equipment Maintenance career ladders surveyed in 1989
 (includes AFSCs 362X4, 411X2A, 454X0A/B, 451X4)

TABLE 20B

COMPARISON OF TAFMS GROUP JOB SATISFACTION INDICATORS
(PERCENT MEMBERS PERFORMING)

	1-48 MOS TAFMS		49-96 MOS TAFMS		97+ MOS TAFMS	
	1989		1989		1989	
	452X3B (N=108)	COMP SAMPLE (N=2,658)	452X3B (N=61)	COMP SAMPLE (N=1,930)	452X3A/B/C (N=309)	COMP SAMPLE (N=2,575)
<u>EXPRESSED JOB INTEREST:</u>						
INTERESTING	81	76	75	75	74	77
SO-SO	12	15	16	16	17	14
DULL	6	8	8	8	8	8
<u>PERCEIVED UTILIZATION OF TALENTS:</u>						
FAIRLY WELL TO PERFECTLY	83	84	85	86	80	84
LITTLE OR NOT AT ALL	17	15	15	14	20	15
<u>PERCEIVED UTILIZATION OF TRAINING:</u>						
FAIRLY WELL TO PERFECTLY	88	88	87	83	79	82
LITTLE OR NOT AT ALL	12	12	13	16	21	18
<u>SENSE OF ACCOMPLISHMENT FROM WORK:</u>						
SATISFIED	85	76	80	75	65	74
NEUTRAL	6	14	5	12	9	11
DISSATISFIED	8	9	15	11	26	14
<u>REENLISTMENT INTENTIONS:</u>						
WILL/PROBABLY WILL REENLIST	49	61	54	72	74	75
WILL NOT/PROBABLY WILL NOT REENLIST	51	37	44	26	17	10
WILL RETIRE	0	2	0	1	9	14

NOTE: Columns may not add to 100 percent due to nonresponse and rounding.
Comparative sample is composed of all Mission Equipment Maintenance career ladders surveyed in 1989
(includes AFSCs 362X4, 411X2A, 454X0A/B, 451X4)

TABLE 20C

COMPARISON OF TAFMS GROUP JOB SATISFACTION INDICATORS
(PERCENT MEMBERS PERFORMING)

	1-48 MOS TAFMS		49-96 MOS TAFMS		97+ MOS TAFMS	
	1989		1989		1989	
	452X3C	COMP SAMPLE	452X3C	COMP SAMPLE	452X3A/B/C	COMP SAMPLE
	(N=172)	(N=2,658)	(N=91)	(N=1,930)	(N=309)	(N=2,575)
<u>EXPRESSED JOB INTEREST:</u>						
INTERESTING	65	76	76	75	74	77
SO-SO	22	15	12	16	17	14
DULL	12	8	11	8	8	8
<u>PERCEIVED UTILIZATION OF TALENTS:</u>						
FAIRLY WELL TO PERFECTLY	75	84	80	86	80	84
LITTLE OR NOT AT ALL	24	15	20	14	20	15
<u>PERCEIVED UTILIZATION OF TRAINING:</u>						
FAIRLY WELL TO PERFECTLY	80	88	78	83	79	82
LITTLE OR NOT AT ALL	20	12	22	16	21	18
<u>SENSE OF ACCOMPLISHMENT FROM WORK:</u>						
SATISFIED	66	76	73	75	65	74
NEUTRAL	17	14	10	12	9	11
DISSATISFIED	17	9	16	11	26	14
<u>REENLISTMENT INTENTIONS:</u>						
WILL/PROBABLY WILL REENLIST	37	61	58	72	74	75
WILL NOT/PROBABLY WILL NOT REENLIST	63	37	41	26	17	10
WILL RETIRE	0	2	0	1	9	14

NOTE: Columns may not add to 100 percent due to nonresponse and rounding
 Comparative sample is composed of all Mission Equipment Maintenance career ladders surveyed in 1989
 (includes AFSCs 362X4, 411X2A, 454X0A/B, 451X4)

sample indicate slightly higher levels of job satisfaction than do those of the comparative sample. However, the career 452X3 group was lower in all areas. It was also noted that job interest, utilization of talents, and utilization of training of AFSC 452X3 personnel tend to decrease as experience increases. However, satisfaction for all three groups is still quite high. Overall, the high percentages of positive responses in these comparisons reflect a career ladder where personnel appear to be well satisfied with their jobs.

An indication of changes in job satisfaction perceptions within the career ladder is provided in Tables 21A, 21B, and 21C, where TAFMS group data for 1990 survey respondents are presented along with data from respondents to the last occupational survey report of the career ladder in 1982. Generally, perceptions associated with job interest have improved for all three groups since the 1982 OSR.

Table 22 presents job satisfaction data for the major jobs (clusters and independent job types) identified in the career ladder structure for AFSC 452X3. An examination of this data can reveal the influences performing certain jobs may have on overall job satisfaction. Job satisfaction indicators for the specialty job groups suggest most members across the career ladder are generally content. However, 55 percent of the debriefer personnel described their jobs as "so-so" or "dull," and 45 percent of the logistics support personnel described their jobs as "so-so" or "dull." Over 78 percent of each of the major career ladder jobs indicated a high perceived use of training. However, both the Supervisor and the Logistics Support personnel perceived little utilization of training. Finally, four of the nine jobs had low reenlistment intentions.

IMPLICATIONS

As explained in the INTRODUCTION, this survey was conducted primarily to provide training personnel with current information on the F/FB-111 Avionic Systems specialty for use in reviewing current training programs and training documents.

The findings of this survey suggest that data support the current structure of the AFSC 452X3 career ladder. The present classification structure, as described by the AFR 39-1 Specialty Descriptions, accurately portrays the jobs in this study.

Analysis of career ladder documents indicates the STS is generally supported by survey data, although a few areas were not. Training personnel and subject-matter experts should review these areas to determine if continued inclusion is warranted in any revisions to the document. Tasks not referenced to the STS should also be reviewed by training personnel and subject-matter experts to determine if new areas should be added to this document. Overall,

TABLE 21A

COMPARISON OF JOB SATISFACTION DATA
(PERCENT MEMBERS PERFORMING)

	<u>1-48 MOS TAFMS</u>			<u>49-96 MOS TAFMS</u>			<u>97+ MOS TAFMS</u>		
	1990	1982		1990	1982		1990	1982	
	452X3A	326X6A		452X3A	326X6		452X3A/B/C	326X6	
	(N=107)	(N=142)		(N=97)	(N=94)		(N=309)	(N=153)	
<u>EXPRESSED JOB INTEREST:</u>									
INTERESTING	82	60		82	63		74	63	
SO-SO	13	23		10	19		17	20	
DULL	6	17		7	17		8	17	
<u>PERCEIVED UTILIZATION OF TALENTS:</u>									
FAIRLY WELL TO PERFECTLY	88	67		88	56		80	69	
LITTLE OR NOT AT ALL	12	32		11	44		20	30	
<u>PERCEIVED UTILIZATION OF TRAINING:</u>									
FAIRLY WELL TO PERFECTLY	89	74		88	67		79	61	
LITTLE OR NOT AT ALL	10	25		12	32		21	38	
<u>SENSE OF ACCOMPLISHMENT FROM WORK:</u>									
SATISFIED	73	*		74	*		65	*	
NEUTRAL	15	*		13	*		9	*	
DISSATISFIED	12	*		12	*		26	*	
<u>REENLISTMENT INTENTIONS:</u>									
WILL/PROBABLY WILL REENLIST	49	30		56	43		74	69	
WILL NOT/PROBABLY WILL NOT REENLIST	51	67		44	56		17	18	
WILL RETIRE	0	0		0	1		9	13	

* Information not available

NOTE: Columns may not add to 100 percent due to nonresponse and rounding

TABLE 21B

COMPARISON OF JOB SATISFACTION DATA
(PERCENT MEMBERS PERFORMING)

	<u>1-48 MOS TAFMS</u>		<u>49-96 MOS TAFMS</u>		<u>97+ MOS TAFMS</u>	
	1990	1982	1990	1982	1990	1982
	452X3B	326X7A	452X3B	326X7	452X3A/B/C	326X7
	(N=108)	(N=130)	(N=61)	(N=102)	(N=309)	(N=123)
<u>EXPRESSED JOB INTEREST:</u>						
INTERESTING	81	77	75	69	74	72
SO-SO	12	12	16	14	17	12
DULL	6	10	8	17	8	15
<u>PERCEIVED UTILIZATION OF TALENTS:</u>						
FAIRLY WELL TO PERFECTLY	83	75	85	72	80	77
LITTLE OR NOT AT ALL	17	25	15	28	20	22
<u>PERCEIVED UTILIZATION OF TRAINING:</u>						
FAIRLY WELL TO PERFECTLY	88	83	87	80	79	72
LITTLE OR NOT AT ALL	12	17	13	19	21	27
<u>SENSE OF ACCOMPLISHMENT FROM WORK:</u>						
SATISFIED	85	*	80	*	65	*
NEUTRAL	6	*	5	*	9	*
DISSATISFIED	8	*	15	*	26	*
<u>REENLISTMENT INTENTIONS:</u>						
WILL/PROBABLY WILL REENLIST	49	37	54	55	74	63
WILL NOT/PROBABLY WILL NOT REENLIST	51	60	44	45	17	16
WILL RETIRE	0	0	0	0	9	19

* Information not available

NOTE: Columns may not add to 100 percent due to nonresponse and rounding

TABLE 21C

COMPARISON OF JOB SATISFACTION DATA
(PERCENT MEMBERS PERFORMING)

	<u>1-48 MOS TAFMS</u>		<u>49-96 MOS TAFMS</u>		<u>97+ MOS TAFMS</u>	
	1990	1982	1990	1982	1990	1982
	452X3C	326X8A	452X3C	326X8	452X3A/B/C	326X8
	(N=172)	(N=110)	(N=91)	(N=98)	(N=309)	(N=139)
<u>EXPRESSED JOB INTEREST:</u>						
INTERESTING	65	61	76	55	74	68
SO-SO	22	24	12	18	17	17
DULL	12	15	11	27	8	15
<u>PERCEIVED UTILIZATION OF TALENTS:</u>						
FAIRLY WELL TO PERFECTLY	75	30	80	60	80	63
LITTLE OR NOT AT ALL	24	70	20	40	20	37
<u>PERCEIVED UTILIZATION OF TRAINING:</u>						
FAIRLY WELL TO PERFECTLY	80	76	78	64	79	63
LITTLE OR NOT AT ALL	20	24	22	35	21	37
<u>SENSE OF ACCOMPLISHMENT FROM WORK:</u>						
SATISFIED	66	*	73	*	65	*
NEUTRAL	17	*	10	*	9	*
DISSATISFIED	17	*	16	*	26	*
<u>REENLISTMENT INTENTIONS:</u>						
WILL/PROBABLY WILL REENLIST	37	35	58	50	74	61
WILL NOT/PROBABLY WILL NOT REENLIST	63	65	41	48	17	19
WILL RETIRE	0	0	0	0	9	19

* Information not available

NOTE: Columns may not add to 100 percent due to nonresponse and rounding

TABLE 22

JOB SATISFACTION DATA FOR CLUSTERS AND INDEPENDENT JOB TYPES
(PERCENT MEMBERS PERFORMING)

	ATTACK CONTROL SYSTEMS	INSTR & FLIGHT CONT SYS	COMM, NAV, & PEN AIDS SYSTEMS	AVIONIC TECHS	QUALITY ASSURANCE INSPECTOR
<u>EXPRESSED JOB INTEREST:</u>					
INTERESTING	80	84	70	79	60
SO-SO	15	10	20	14	40
DULL	5	5	9	7	0
<u>PERCEIVED UTILIZATION OF TALENTS:</u>					
FAIRLY WELL TO PERFECTLY	88	86	78	86	80
LITTLE OR NOT AT ALL	12	14	22	14	20
<u>PERCEIVED UTILIZATION OF TRAINING:</u>					
FAIRLY WELL TO PERFECTLY	89	93	83	87	80
LITTLE OR NOT AT ALL	11	7	17	13	20
<u>REENLISTMENT INTENTIONS:</u>					
WILL/PROBABLY WILL REENLIST	59	59	51	72	60
WILL NOT/PROBABLY WILL NOT REENLIST	40	40	49	23	40
WILL RETIRE	1	1	0	5	0

NOTE: Columns may not add to 100 percent due to nonresponse or rounding

TABLE 22 (CONTINUED)

JOB SATISFACTION DATA FOR CLUSTERS AND INDEPENDENT JOB TYPES
(PERCENT MEMBERS PERFORMING)

	<u>SUPV</u>	<u>LOGISTICS SUPPORT</u>	<u>DEBRIEFERS</u>	<u>TRAINING</u>
<u>EXPRESSED JOB INTEREST:</u>				
INTERESTING	71	55	44	70
SO-SO	17	19	22	20
DULL	13	26	33	10
<u>PERCEIVED UTILIZATION OF TALENTS:</u>				
FAIRLY WELL TO PERFECTLY	75	59	78	80
LITTLE OR NOT AT ALL	25	40	22	20
<u>PERCEIVED UTILIZATION OF TRAINING:</u>				
FAIRLY WELL TO PERFECTLY	54	47	78	80
LITTLE OR NOT AT ALL	46	53	22	20
<u>REENLISTMENT INTENTIONS:</u>				
WILL/PROBABLY WILL REENLIST	63	45	44	70
WILL NOT/PROBABLY WILL NOT REENLIST	4	49	56	30
WILL RETIRE	33	4	0	0

NOTE: Columns may not add to 100 percent due to nonresponse or rounding

each POI is well supported. However, tasks not referenced should be reviewed to determine if new areas should be added to the basic course or if existing areas could be fine tuned.

No serious job satisfaction problems appear to exist within this specialty. Overall, job satisfaction responses were almost all higher than that of a comparative sample of similar Air Force personnel in surveyed 1989.

The findings of this OSR come directly from the survey data collected from F/FB-111 Avionic System personnel worldwide. These data are readily available to training and utilization personnel, functional managers, and any other interested parties having a need for such information. Much of the data are compiled into extracts which are excellent tools in the decision-making process. These data extracts should be used when training or utilization decisions are made.

APPENDIX A
SELECTED REPRESENTATIVE TASKS PERFORMED BY
CAREER LADDER SPECIALTY JOB GROUPS

TABLE I

ATTACK CONTROL SYSTEMS CLUSTER
ST0037

GROUP SIZE: 256	AVERAGE TAFMS: 70 MONTHS
PERCENT OF SAMPLE: 26%	AVERAGE TICE: 51 MONTHS
AVERAGE PAYGRADE: E-4	PERCENT IN 1ST ENL: 40%

TASKS	PERCENT MEMBERS PERFORMING
H343 REMOVE OR INSTALL ARS LINE REPLACEMENT ITEMS	98
H312 ISOLATE MALFUNCTIONS WITHIN TERRAIN-FOLLOWING RADAR (TFR) SYSTEMS	97
H297 ISOLATE MALFUNCTIONS WITHIN ATTACK RADAR SYSTEMS (ARS)	97
H358 REMOVE OR INSTALL TFR SYSTEM LRUs	96
H304 ISOLATE MALFUNCTIONS WITHIN INERTIAL NAVIGATION SYSTEMS (INS)	96
H341 PERFORM PRESSURIZATION AND LEAK CHECKS ON TFRs	96
H340 PERFORM PRESSURIZATION AND LEAK CHECKS ON ARSs	95
G277 INSPECT WAVEGUIDES	95
H313 ISOLATE PRESSURE LEAKS WITHIN ARSs	95
G291 TRACE WIRING, SYSTEM, AND INTERFACE DIAGRAMS	94
G282 REMOVE OR INSTALL WAVEGUIDES	94
H314 ISOLATE PRESSURE LEAKS WITHIN TFRs	94
H310 ISOLATE MALFUNCTIONS WITHIN RADAR ALTIMETERS	93
G284 REPAIR COAXIAL CONNECTORS	93
G278 ISOLATE MALFUNCTIONS WITHIN AIRCRAFT WIRING	92
G283 REPAIR AIRCRAFT WIRING	92
H351 REMOVE OR INSTALL INS LRUs	92
G285 REPAIR MULTIPIN CONNECTORS	92
H338 PERFORM OPERATIONAL CHECKS OF RADAR ALTIMETERS	91
G281 PERFORM SAFETY WIRING	90
F192 CONNECT OR DISCONNECT AIRCRAFT EXTERNAL COOLING AIR UNITS	89
H356 REMOVE OR INSTALL RADAR ALTIMETER SYSTEM LRUs	89
G289 SOLDER OR CRIMP CONNECTIONS ON AIRCRAFT WIRING	89
F209 OPEN OR CLOSE AIRFRAME COMPONENTS SUCH AS COWLINGS, PANELS, OR DOORS	86
H331 PERFORM OPERATIONAL CHECKS AND BIT OF TFRs	86

AVIONIC SYSTEMS
INSTALLED/MAINTAINED

Air Compressor
Aircraft Interphone
Aircraft Jack
Aircraft Radio
Bomb Lift (Jammer)
Bomb Trailer
Canopy System
Coleman Tug
External Cooling Air Unit

Gas Turbine Generator/Compressor
Gaseous Oxygen Servicing Equipment
Ground Heater and Blower
Hydraulic Servicing Cart
Jammer-Loader (EL Cart)
Liquid Oxygen Servicing Equipment
Maintenance Stand
Nitrogen Servicing Equipment
Portable Generator
Portable Hydraulic Test Stand
Portable Lighting Equipment

AVIONIC SYSTEMS TEST
EQUIPMENT INSTALLED/
MAINTAINED

Analyzer, Spectrum
Angle-of-Attack Probs
Boresight
Box, Breakout
Box, Inter Comb Altd Radar Altm (CARA)
Box, Interface Lower Mux Unit (LMU)
Calibrator, Compass
Flightline, Computer Loader (FLCL)
Frequency Counter
Generator, Signal
Heat Gun, HT-900
Milliohmmeter (Shallcross)
Mission Data Loader
Multimeter, Analog
Multimeter, Digital
Optical Display Sight (ODS)
Oscilloscope
Reflectometer (TDR)
Simulator, Dispense Set (AN/ALE-28)
Test Set, Air Sig Data Rec Sys (SLUMP)
Test Set, Aux Flt Ref Sys (AFRS)
Test Set, Beacon Transponder
Test Set, Digital Flightline Tester (DFLT)
Test Set, Gyro-Bias
Test Set, IFF Transponder
Test Set, Instrument Landing Sys (ILS)
Test Set, Rad Transponder (AN/UPM-138)
Test Set, Subsystem Tie-in
Test Set, TACAN (AN/ARM-184)
Test Set, Terrain Fol Rad Sys (TFRS)
Tester, Antenna Hat (TD845/APM-181A)
Tester, Capacitor
Tester, Fuel Quantity
Tester, Micro Int Diag Anal Sys (MIDAS)
Tester, Radio Freq (RF) (AN/USM-427)
Tester, Tran Line (AN/USM-406 Test Set)
Tester, Waveguide Pressure
Tru-Line Watt Meter
TTU-205 C/E
TTU-205 D/F (Digital)
Ultrasonic Leak Detector

TABLE II

INSTRUMENT AND FLIGHT CONTROL SYSTEMS CLUSTER
ST0074GROUP SIZE: 185
PERCENT OF SAMPLE: 19%
AVERAGE PAYGRADE: E-4AVERAGE TAFMS: 55 MONTHS
AVERAGE TICF: 48 MONTHS
PERCENT IN 1ST ENL: 57%

TASKS	PERCENT MEMBERS PERFORMING
I410 PERFORM OPERATIONAL CHECKS OF PRIMARY FLIGHT CONTROLS AND TRIM SYSTEMS	99
I402 PERFORM OPERATIONAL CHECKS OF AUTOMATIC FLIGHT CONTROLS SYSTEMS	99
I420 REMOVE OR INSTALL AUTOMATIC FLIGHT CONTROL SYSTEM LRUs	99
I369 CALIBRATE FUEL QUANTITY INDICATING SYSTEMS	99
I405 PERFORM OPERATIONAL CHECKS OF FLIGHT CONTROL POSITION INDICATING SYSTEMS	98
I399 PERFORM OPERATIONAL CHECKS OF AIR DATA COMPUTER AND PRIMARY INSTRUMENT SYSTEMS	98
I411 PERFORM OPERATIONAL CHECKS OF STABILITY AUGMENTATION/STALL INHIBITOR SYSTEMS	98
I407 PERFORM OPERATIONAL CHECKS OF FUEL QUANTITY INDICATING SYSTEMS	98
I432 REMOVE OR INSTALL PITOT STATIC AND STANDBY INSTRUMENTS SYSTEM LRUs	98
I426 REMOVE OR INSTALL FUEL QUANTITY INDICATING SYSTEM LRUs	98
I371 ISOLATE MALFUNCTIONS WITHIN AIR DATA COMPUTER AND PRIMARY INDICATING SYSTEMS	97
I435 REMOVE OR INSTALL STABILITY AUGMENTATION/STALL INHIBITOR SYSTEM LRUs	97
I423 REMOVE OR INSTALL FLIGHT CONTROL POSITION INDICATING SYSTEM LRUs	97
I377 ISOLATE MALFUNCTIONS WITHIN FLIGHT CONTROL POSITION INDICATING SYSTEMS	97
I374 ISOLATE MALFUNCTIONS WITHIN AUTOMATIC FLIGHT CONTROL SYSTEMS	97
G291 TRACE WIRING, SYSTEM, AND INTERFACE DIAGRAMS	97
I387 ISOLATE MALFUNCTIONS WITHIN PITOT STATIC AND STANDBY INSTRUMENT SYSTEMS	97
I388 ISOLATE MALFUNCTIONS WITHIN PRIMARY FLIGHT CONTROL AND TRIM SYSTEMS	97
I376 ISOLATE MALFUNCTIONS WITHIN ENGINE PRESSURE RATIO (EPR) INDICATING SYSTEMS	96

AVIONIC SYSTEMS
INSTALLED/MAINTAINEDAir Compressor
Aircraft Interphone
Aircraft Jack

Aircraft Radio
 Bomb Lift (Jammer)
 Bomb Trailer
 Canopy System
 Coleman Tug
 External Cooling Air Unit
 Gas Turbine Generator/Compressor
 Gaseous Oxygen Servicing Equipment
 Ground Heater and Blower
 Hydraulic Servicing Cart
 Jammer-Loader (EL Cart)
 Liquid Oxygen Servicing Equipment
 Maintenance Stand
 Nitrogen Servicing Equipment
 Portable Generator
 Portable Hydraulic Test Stand
 Portable Lighting Equipment

AVIONIC SYSTEMS TEST
 EQUIPMENT INSTALLED/
 MAINTAINED

Analyzer, Logic
 Analyzer, Signature
 Analyzer, Spectrum
 Angle-of-Attack Probs
 Boresight
 Box, Breakout
 Box, Capacitor Substitution
 Box, Inter Comb Altd Radar Altm (CARA)
 Box, Interface Lower Mux Unit (LMU)
 Calibrator, Compass
 Digital Logic Probe
 Flightline, Computer Loader (FLCL)
 Generator, Signal
 Heat Gun, HT-900
 Logic Current Tracer
 Milliohmmeter (Shallcross)
 Mission Data Loader
 Multimeter, Analog
 Multimeter, Digital
 Optical Display Sight (ODS)
 Oscilloscope
 Reflectometer (TDR)
 Simulator, Dispense Set (AN/ALE-28)
 Test Set, Air Sig Data Rec Sys (SLUMP)
 Test Set, Aux Flt Ref Sys (AFRS)
 Test Set, Beacon Transponder
 Test Set, Digital Flightline Tester (DFLT)
 Test Set, Gyro-Bias
 Test Set, IFF transponder
 Test Set, Instrument Landing Sys (ILS)
 Test Set, Rad Transponder (AN/UPM-138)
 Test Set, Subsystem Tie-in
 Test Set, TACAN (AN/ARM-184)
 Test Set, Terrain Fol Rad Sys (TFRS)

Tester, Antenna Hat (TD845/APM-181A)
Tester, Capacitor
Tester, Field Strength
Tester, Fuel Quantity
Tester, Micro Int Diag Anal Sys (MIDAS)
Tester, Radio Freq (RF) (AN/USM-427)
Tester, Tran Line (AN/USM-406 Test Set)
Tester, Waveguide Pressure
Tru-Line Watt Meter
TTU-205 C/E
TTU-205 D/F (Digital)
Ultrasonic Leak Detector

TABLE III

COMMUNICATION, NAVIGATION, AND PENETRATION AIDS SYSTEM CLUSTER
ST0045

GROUP SIZE: 299
 PERCENT OF SAMPLE: 30%
 AVERAGE PAYGRADE: E-4

AVERAGE TAFMS: 60 MONTHS
 AVERAGE TICF: 48 MONTHS
 PERCENT IN 1ST ENL: 53%

TASKS	PERCENT MEMBERS PERFORMING
J452 ISOLATE MALFUNCTIONS WITHIN HIGH-FREQUENCY (HF) COMMUNICATIONS SYSTEMS	99
J477 PERFORM OPERATIONAL CHECKS OF ILS	99
J461 ISOLATE MALFUNCTIONS WITHIN ULTRA HIGH FREQUENCY (UHF) COMMUNICATIONS SYSTEMS	98
J478 PERFORM OPERATIONAL CHECKS OF INTERCOMMUNICATIONS SYSTEMS	98
J455 ISOLATE MALFUNCTIONS WITHIN AIR-TO-GROUND IDENTIFICATION FRIEND OR FOE (AG/IFF) TRANSPONDER SYSTEMS	98
J475 PERFORM OPERATIONAL CHECKS AND BIT OF TACAN SYSTEMS	98
J460 ISOLATE MALFUNCTIONS WITHIN TACTICAL AIR NAVIGATION (TACAN) SYSTEMS	97
J463 PERFORM OPERATIONAL CHECKS AND BIT OF AN/ALR-62 CRSs	97
J505 REMOVE OR INSTALL TACAN SYSTEM LRUs	97
J483 PERFORM OPERATIONAL CHECKS OF UHF COMMUNICATIONS SYSTEMS	96
J496 REMOVE OR INSTALL INTERCOMMUNICATIONS SYSTEM LRUs	96
J495 REMOVE OR INSTALL ILS LRUs	96
J453 ISOLATE MALFUNCTIONS WITHIN INSTRUMENT LANDING SYSTEMS (ILS)	96
J472 PERFORM OPERATIONAL CHECKS AND BIT OF HF COMMUNICATIONS SYSTEMS	96
J450 ISOLATE MALFUNCTIONS WITHIN COUNTERMEASURES DISPENSER SETS	96
J506 REMOVE OR INSTALL UHF COMMUNICATIONS SYSTEM LRUs	96
G291 TRACE WIRING, SYSTEM, AND INTERFACE DIAGRAMS	96
J490 REMOVE OR INSTALL CMS LRUs	96
G284 REPAIR COAXIAL CONNECTORS	95
J448 ISOLATE MALFUNCTIONS WITHIN AN/ALR-62 CRSs	95

AVIONIC SYSTEMS
 INSTALLED/MAINTAINED

Air Compressor
 Aircraft Interphone
 Aircraft Jack
 Aircraft Radio
 Bomb Lift (Jammer)
 Bomb Trailer
 Canopy System
 Coleman Tug
 External Cooling Air Unit
 Gas Turbine Generator/Compressor
 Gaseous Oxygen Servicing Equipment

Ground Heater and Blower
Hydraulic Servicing Cart
Jammer-Loader (EL Cart)
Maintenance Stand
Nitrogen Servicing Equipment
Portable Generator
Portable Hydraulic Test Stand
Portable Lighting Equipment

AVIONIC SYSTEMS TEST
EQUIPMENT INSTALLED/
MAINTAINED

Analyzer, Spectrum
Angle-of-Attack Probs
Boresight
Box, Breakout
Box, Inter Comb Altd Radar Altm (CARA)
Box, Interface Lower Mux Unit (LMU)
Calibrator, Compass
Flightline, Computer Loader (FLCL)
Frequency Counter
Generator, Signal
Heat Gun, HT-900
Milliohmmer (Shallcross)
Mission Data Loader
Multimeter, Analog
Multimeter, Digital
Optical Display Sight (ODS)
Oscilloscope
Reflectometer (TDR)
Simulator, Dispense Set (AN/ALE-28)
Test Set, Air Sig Data Rec Sys (SLUMP)
Test Set, Aux Flt Ref Sys (AFRS)
Test Set, Beacon Transponder
Test Set, Digital Flightline Tester (DFLT)
Test Set, Gyro-Bias
Test Set, IFF Transponder
Test Set, Instrument Landing Sys (ILS)
Test Set, Rad Transponder (AN/UPM-138)
Test Set, Subsystem Tie-in
Test Set, TACAN (AN/ARM-184)
Test Set, Terrain Fol Rad Sys (TFRS)
Tester, Antenna Hat (TD845/APM-181A)
Tester, Capacitor
Tester, Field Strength
Tester, Fuel Quantity
Tester, Micro Int Diag Anal Sys (MIDAS)
Tester, Radio Freq (RF) (AN/USM-427)
Tester, Tran Line (AN/USM-406 Test Set)
Tester, Waveguide Pressure
Tru-Line Watt Meter
TTU-205 C/E
TTU-205 D/F (Digital)
Ultrasonic Leak Detector

TABLE IV
AVIONIC TECHNICIANS CLUSTER
ST0089

GROUP SIZE: 107	AVERAGE TAFMS: 123 MONTHS
PERCENT OF SAMPLE: 11%	AVERAGE TICF: 103 MONTHS
AVERAGE PAYGRADE: E-5	PERCENT IN 1ST ENL: 1%

TASKS	PERCENT MEMBERS PERFORMING
G291 TRACE WIRING, SYSTEM AND INTERFACE DIAGRAMS	98
F193 CONNECT OR DISCONNECT AIRCRAFT EXTERNAL POWER	97
G281 PERFORM SAFETY WIRING	97
I411 PERFORM OPERATIONAL CHECKS OF STABILITY AUGMENTATION/STALL INHIBITOR SYSTEMS	96
I387 ISOLATE MALFUNCTIONS WITHIN PITOT STATIC AND STANDBY INSTRUMENT SYSTEMS	96
G280 PERFORM AIRCRAFT SAFE FOR MAINTENANCE CHECKS	96
G283 REPAIR AIRCRAFT WIRING	96
I402 PERFORM OPERATIONAL CHECKS OF AUTOMATIC FLIGHT CONTROL SYSTEMS	96
I380 ISOLATE MALFUNCTIONS WITHIN FUEL FLOW INDICATING SYSTEMS	96
G274 INSPECT AIRCRAFT WIRING	95
I374 ISOLATE MALFUNCTIONS WITHIN AUTOMATIC FLIGHT CONTROL SYSTEMS	95
F192 CONNECT OR DISCONNECT AIRCRAFT EXTERNAL COOLING AIR UNITS	95
I410 PERFORM OPERATIONAL CHECKS OF PRIMARY FLIGHT CONTROLS AND TRIM SYSTEMS	95
I381 ISOLATE MALFUNCTIONS WITHIN FUEL QUANTITY INDICATING SYSTEMS	95
I420 REMOVE OR INSTALL AUTOMATIC FLIGHT CONTROL SYSTEM LRUs	95
I398 PERFORM OPERATIONAL AND LEAK CHECKS OF PITOT STATIC AND STANDBY INSTRUMENT SYSTEMS	95
I432 REMOVE OR INSTALL PITOT STATIC AND STANDBY INSTRUMENTS SYSTEM LRUs	95

AVIONIC SYSTEMS
INSTALLED/MAINTAINED

Air Compressor
Aircraft Interphone
Aircraft Jack
Aircraft Radio
Bomb Lift (Jammer)
Bomb Trailer
Canopy System
Coleman Tug
External Cooling Air Unit
Gas Turbine Generator/Compressor
Gaseous Oxygen Servicing Equipment
Ground Heater and Blower

Hydraulic Servicing Cart
Jammer-Loader (EL Cart)
Maintenance Stand
Nitrogen Servicing Equipment
Oil Servicing Cart
Portable Generator
Portable Hydraulic Test Stand
Portable Lighting Equipment

AVIONIC SYSTEM TEST
EQUIPMENT INSTALLED/
MAINTAINED

Analyzer, Logic
Analyzer Signature
Analyzer, Spectrum
Angle-of-Attack Probs
Boresight
Box, Breakout
Box, Inter Comb Altd Radar Altm (CARA)
Box, Interface Lower Mux Unit (LMU)
Box, WOW/Proximity
Calibrator, Compass
Direct Current (DC) Restorer
Flightline, Computer Loader (FLCL)
Frequency Counter
Generator, Signal
Heat Gun, HT-900
Milliohmmeter (Shallcross)
Mission Data Loader
Multimeter, Analog
Multimeter, Digital
Optical Display Sight (ODS)
Oscilloscope
Reflectometer (TDR)
Simulator, Dispense Set (AN/ALE-28)
Test Set, Air Sig Data Rec Sys (SLUMP)
Test Set, Aux Flt Ref Sys (AFRS)
Test Set, Beacon Transponder
Test Set, Digital Flightline Tester (DFLT)
Test Set, Gyro-Bias
Test Set, IFF Transponder
Test Set, Instrument Landing Sys (ILS)
Test Set, Rad Transponder (AN/UPM-138)
Test Set, Subsystem Tie-in
Test Set, TACAN (AN/ARM-184)
Test Set, Terrain Fol Rad Sys (TFRS)
Tester, Antenna Hat (TD845/APM-181A)
Tester, Capacitor
Tester, Field Strength
Tester, Fuel Quantity
Tester, Micro Int Diag Anal Sys (MIDAS)
Tester, Radio Freq (RF) (AN/USM-427)
Tester, Tran Line (AN/USM-406 Test Set)
Tester, Waveguide Pressure

Tru-Line Watt Meter
TTU-205 C/E
TTU-205 D/F (Digital)
Ultrasonic Leak Detector

TABLE V
QUALITY ASSURANCE INSPECTORS IJT
ST0078

GROUP SIZE: 5	AVERAGE TAFMS: 117 MONTHS
PERCENT OF SAMPLE: LESS THAN 1%	AVERAGE TICF: 104 MONTHS
AVERAGE PAYGRADE: E-5	PERCENT IN 1ST ENL: 0%

TASKS	PERCENT MEMBERS PERFORMING
C76 INSPECT FLIGHTLINE MAINTENANCE ACTIONS	100
C78 INVESTIGATE ACCIDENTS OR INCIDENTS	100
C62 EVALUATE MAINTENANCE AND INSPECTION REPORT FINDINGS	100
C67 EVALUATE PERSONNEL FOR COMPLIANCE WITH PERFORMANCE STANDARDS OR TECHNICAL ORDERS	100
C61 EVALUATE EQUIPMENT MODIFICATION DATA	100
A11 DEVELOP QUALITY ASSURANCE PROGRAMS	100
G276 INSPECT RADIO FREQUENCY (RF) CABLES	100
E123 ANNOTATE OR INITIATE AF FORMS 1800 (OPERATOR'S INSPECTION GUIDE AND TROUBLE REPORT (GENERAL PURPOSE VEHICLES))	100
G274 INSPECT AIRCRAFT WIRING	100
E144 INITIATE, ANNOTATE, OR REVIEW AIRCRAFT FLIGHT OR MAINTENANCE RECORDS, SUCH AS AFTO FORMS 781 SERIES	100
C77 INSPECT PERSONNEL FOR COMPLIANCE WITH MILITARY STANDARDS	80
E174 PERFORM ROUTINE INSPECTIONS OF TOOLS AND EQUIPMENT	80
E145 INSPECT TOOLS OR EQUIPMENT	80
C57 ANALYZE RECURRING TROUBLES ON EQUIPMENT IDENTIFIED BY DEFICIENCY OR SERVICE REPORTS	80
E172 PARTICIPATE IN TCTO MEETINGS	80
C71 EVALUATE TECHNICAL ORDER IMPROVEMENT REPORTS	80
G277 INSPECT WAVEGUIDES	80

AVIONIC SYSTEMS	Air Compressor
INSTALLED/MAINTAINED	Aircraft Interphone
	Aircraft Jack
	Aircraft Radio
	Bomb Lift (Jammer)
	Bomb Trailer
	External Cooling Air Unit
	Gas Turbine Generator/Compressor
	Ground Heater and Blower
	Jammer-Loader (EL Cart)
	Maintenance Stand
	Oil Servicing Cart
	Portable Hydraulic Test Stand
	Portable Lighting Equipment

AVIONIC SYSTEM TEST
EQUIPMENT INSTALLED/
MAINTAINED

Angle-of-Attack Probs
Boresight
Box, Inter Comb Altd Radar Altm (CARA)
Flightline, computer loader (FLCL)
Generator, Signal
Heat Gun, HT-900
Milliohmmer (Shallcross)
Mission Data Loader
Multimeter, Analog
Multimeter, Digital
Optical Display Sight (ODS)
Oscilloscope
Reflectometer (TDR)
Simulator, Dispense Set (AN/ALE-28)
Test Set, Air Sig Data Rec Sys (SLUMP)
Test Set, Aux Flt Ref Sys (AFRS)
Test Set, Beacon Transponder
Test Set, Digital Flightline Tester (DFLT)
Test Set, IFF Transponder
Test Set, Instrument Landing Sys (ILS)
Test Set, Rad Transponder (AN/UPM-138)
Test Set, Subsystem Tie-in
Test Set, TACAN (AN/ARM-184)
Test Set, Terrain Fol Rad Sys (TFRS)
Tester, Antenna Hat (TD845/APM-181A)
Tester, Capacitor
Tester, Field Strength
Tester, Fuel Quantity
Tester, Micro Int Diag Anal Sys (MIDAS)
Tester, Tran Line (AN/USM-406 Test Set)
Tester, Waveguide Pressure
Tru-Line Watt Meter
TTU-205 C/E
TTU-205 D/F (Digital)
Ultrasonic Leak Detector

TABLE VI

SUPERVISORS CLUSTER
ST0036GROUP SIZE: 24
PERCENT OF SAMPLE: 2%
AVERAGE PAYGRADE: E-7AVERAGE TAFMS: 189 MONTHS
AVERAGE TICE: 112 MONTHS
PERCENT IN 1ST ENL: 0%

TASKS	PERCENT MEMBERS PERFORMING
C82 WRITE APRs	92
C84 WRITE RECOMMENDATIONS FOR AWARDS AND DECORATIONS	92
A7 DETERMINE WORK PRIORITIES	88
A1 ASSIGN MAINTENANCE AND REPAIR WORK	88
B45 INTERPRET POLICIES, DIRECTIVES, OR PROCEDURES FOR SUBORDINATES	88
B30 COUNSEL PERSONNEL ON PERSONAL OR MILITARY-RELATED MATTERS	88
D105 MAINTAIN TRAINING RECORDS	88
D47 ANNOTATE TRAINING RECORDS	84
C74 INDORSE AIRMAN PERFORMANCE REPORTS (APR)	83
C77 INSPECT PERSONNEL FOR COMPLIANCE WITH MILITARY STANDARDS	80
A19 PLAN OR SCHEDULE WORK ASSIGNMENTS	75
A2 ASSIGN PERSONNEL TO DUTY POSITIONS	75
D93 COUNSEL TRAINEES ON TRAINING PROGRESS	75
A16 ESTABLISH WORK METHODS OR CONTROLS	71
A23 SCHEDULE LEAVES	71
D103 EVALUATE PROGRESS OF TRAINEES	71
C67 EVALUATE PERSONNEL FOR COMPLIANCE WITH PERFORMANCE STANDARDS OR TECHNICAL ORDERS	71

AVIONIC SYSTEMS
INSTALLED/MAINTAINED

Air Compressor
 Aircraft Interphone
 Aircraft Jack
 Aircraft Radio
 Bomb Lift (Jammer)
 Canopy System
 Coleman Tug
 External Cooling Air Unit
 Gas Turbine Generator/Compressor
 Gaseous Oxygen Servicing Equipment
 Ground Heater and Blower
 Hydraulic Servicing Cart
 Jammer-Loader (EL Cart)
 Maintenance Stand
 Nitrogen Servicing Equipment
 Oil Servicing Cart
 Portable Generator
 Portable Hydraulic Test Stand
 Portable Lighting Equipment

AVIONIC SYSTEM TEST
EQUIPMENT INSTALLED/
MAINTAINED

Analyzer, Spectrum
Angle-of-Attack Probs
Boresight
Box, Breakout
Box, Inter Comb Altd Radar Altm (CARA)
Box, Interface Lower Mux Unit (LMU)
Calibrator, Compass
Flightline, Computer Loader (FLCL)
Frequency Counter
Generator, Signal
Heat Gun, HT-900
Milliohmmer (Shallcross)
Mission Data Loader
Multimeter, Analog
Multimeter, Digital
Optical Display Sight (ODS)
Oscilloscope
Reflectometer (TDR)
Simulator, Dispense Set (AN/ALE-28)
Test Set, Air Sig Data Rec Sys (SLUMP)
Test Set, Aux Flt Ref Sys (AFRS)
Test Set, Beacon Transponder
Test Set, Digital Flightline Tester (DFLT)
Test Set, Gyro-Bias
Test Set, IFF Transponder
Test Set, Instrument Landing Sys (ILS)
Test Set, Rad Transponder (AN/UFM-138)
Test Set, Subsystem Tie-in
Test Set, TACAN (AN/ARM-184)
Test Set, Terrain Fol Rad Sys (TFRS)
Tester, Antenna Hat (TD845/APM-181A)
Tester, Field Strength
Tester, Fuel Quantity
Tester, Radio Freq (RF) (AN/USM-427)
Tester, Tran Line (AN/USM-406 Test Set)
Tester, Waveguide Pressure
Tru-Line Watt Meter
TTU-205 C/E
TTU-205 D/F (Digital)
Ultrasonic Leak Detector

TABLE VII
LOGISTICS SUPPORT CLUSTER
ST0014

GROUP SIZE: 47	AVERAGE TAFMS: 94 MONTHS
PERCENT OF SAMPLE: 5%	AVERAGE TICF: 73 MONTHS
AVERAGE PAYGRADE: E-5	PERCENT IN 1ST ENL: 40%

TASKS	PERCENT MEMBERS PERFORMING
E145 INSPECT TOOLS OR EQUIPMENT	87
E147 INVENTORY TOOLS, SUCH AS CONSOLIDATED TOOL KITS (CTK)	85
E148 ISSUE TOOLS, EQUIPMENT OR SUPPLIES	81
E146 INVENTORY TOOLS OR SUPPLIES	74
E173 PERFORM PERIODIC INSPECTIONS OF TOOLS OR EQUIPMENT	72
E174 PERFORM ROUTINE INSPECTIONS OF TOOLS OR EQUIPMENT	70
E168 MAINTAIN TOOL CRIBS	66
E136 INITIATE AFTO FORMS 350 (REPAIRABLE ITEM PROCESSING TAG)	64
E127 COMPLETE AF FORMS 2005 (ISSUE/TURN IN REQUEST)	64
E130 DRESS OR REPAIR TOOLS	57
E175 PERFORM SECURITY CHECKS OF TOOL CRIB, HANGAR, OR VEHICLES	57
F122 ANNOTATE OR INITIATE AF FORMS 1297 (TEMPORARY ISSUE RECEIPT)	57
E124 ANNOTATE, INITIATE, OR COMPLETE AFTO FORMS 244 AND 245 (INDUSTRIAL/SUPPORT EQUIPMENT RECORD)	47
F171 PACKAGE TOOLS OR EQUIPMENT FOR SHIPMENT OR DEPLOYMENT	43
C82 WRITE APRs	38
E125 ATTACH OR ANNOTATE EQUIPMENT STATUS LABELS OR TAGS, SUCH AS DD FORMS 1574 (SERVICEABLE TAG - MATERIAL)	36
E123 ANNOTATE OR INITIATE AF FORMS 1800 (OPERATOR'S INSPECTION GUIDE AND TROUBLE REPORT (GENERAL PURPOSE VEHICLES))	36

AVIONIC SYSTEMS
INSTALLED/MAINTAINED

Air Compressor
Aircraft Interphone
Aircraft Jack
Aircraft Radio
Bomb Lift (Jammer)
Canopy System
Coleman Tug
External Cooling Air Unit
Gas Turbine Generator/Compressor
Ground Heater and Blower
Hydraulic Servicing Cart
Jammer-Loader (EL Cart)
Maintenance Stand
Nitrogen Servicing Equipment
Portable Generator
Portable Hydraulic Test Stand
Portable Lighting Equipment

AVIONIC SYSTEM TEST
EQUIPMENT INSTALLED/
MAINTAINED

Analyzer, Logic
Analyzer, Signature
Analyzer, Spectrum
Angle-of-Attack Probs
Boresight
Box, Breakout
Box, Inter Comb Altd Radar Altm (CARA)
Box, Interface Lower Mux Unit (LMU)
Calibrator, Compass
Digital Logic Probe
Flightline, Computer Loader (FLCL)
Frequency Counter
Generator, Signal
Heat Gun, HT-900
Hydrometer
Improved Radar Simulator (IRS)
Milliohmmer (Shallcross)
Mission Data Loader
Multimeter, Analog
Multimeter, Digital
Optical Display Sight (ODS)
Oscilloscope
Reflectometer (TDR)
Simulator, Dispense Set (AN/ALE-28)
Test Set, Air Sig Data Rec Sys (SLUMP)
Test Set, Aux Flt Ref Sys (AFRS)
Test Set, Beacon Transponder
Test Set, Digital Flightline Tester (DFLT)
Test Set, Grnd Haz Rad Prot (GHRP)
Test Set, IFF Transponder
Test Set, Instrument Landing Sys (ILS)
Test Set, Micro Int Diag Anal Sys (MIDAS)
Test Set, Rad Transponder (AN/UPM-138)
Test Set, Subsystem Tie-in
Test Set, TACAN (AN/ARM-184)
Test Set, Terrain Fol Rad Sys (TFRS)
Tester, Antenna Hat (TD845/APM-181A)
Tester, Field Strength
Tester, Fuel Quantity
Tester, Radio Freq (RF) (AN/USM-427)
Tester, Tran Line (AN/USM-406 Test Set)
Tester, Waveguide Pressure
Tru-Line Watt Meter
TTU-205 C/E
TTU-205 D/F (Digital)
Ultrasonic Leak Detector

TABLE VIII

DEBRIEFERS IJT
ST0044GROUP SIZE: 9
PERCENT OF SAMPLE: 1%
AVERAGE PAYGRADE: E-4AVERAGE TAFMS: 65 MONTHS
AVERAGE TICF: 64 MONTHS
PERCENT IN 1ST ENL: 11%

TASKS	PERCENT MEMBERS PERFORMING
G273 DEBRIEF AIRCREWS	100
E153 MAINTAIN DEBRIEFING FORMS	78
E144 INITIATE, ANNOTATE, OR REVIEW AIRCRAFT FLIGHT OR MAINTENANCE RECORDS, SUCH AS AFTJ FORMS 781 SERIES	67
E150 MAINTAIN AIRCRAFT ANALYSIS HISTORICAL RECORDS	67
D105 MAINTAIN TRAINING RECORDS	56
E140 INITIATE OR COMPLETE AFTO FORMS 349-3 (MAINTENANCE DATA COLLECTION RECORD (AUTOMATED))	44
B56 SUPERVISE MILITARY PERSONNEL WITH AFSC OTHER THAN 452X3	22
A1 ASSIGN MAINTENANCE AND REPAIR WORK	22
E181 REPORT SOFTWARE DEFICIENCIES, OTHER THAN AIRCRAFT SOFTWARE	22
C73 IDENTIFY PROBLEM AREAS USING DEFICIENCY OR SERVICE REPORTS	22
A15 ESTABLISH PERFORMANCE STANDARDS FOR SUBORDINATES	22
E127 COMPLETE AF FORMS 2005 (ISSUE/TURN-IN REQUEST)	22

AVIONIC SYSTEMS
INSTALLED/MAINTAINEDAircraft Interphone
Hydraulic Servicing CartAVIONIC SYSTEM TEST
EQUIPMENT INSTALLED/
MAINTAINEDAngle-of-Attack Probs
Boresight
Calibrator, Compass
Digital Logic Probe
Mission Data Loader
Multimeter, Digital
Test Set, Air Sig Data Rec Sys (SLUMP)
Test Set, Aux Flt Ref Sys (AFRS)
Test Set, Beacon Transponder
Test Set, Digital Flightline Tester (DFLT)
Test Set, Grnd Haz Rad Prot (GHRP)
Test Set, IFF Transponder
Tester, Antenna Hat (TD845/APM-181A)
Tester, Fuel Quantity
TTU-205 D/F (Digital)

TABLE IX

TRAINING IJT
ST0161

GROUP SIZE: 10
 PERCENT OF SAMPLE: 1%
 AVERAGE PAYGRADE: E-5

AVERAGE TAFMS: 105 MONTHS
 AVERAGE TICF: 81 MONTHS
 PERCENT IN 1ST ENL: 0%

TASKS	PERCENT MEMBERS PERFORMING
D98 DEVELOP RESIDENT COURSE TRAINING MATERIALS	100
D86 ADMINISTER TESTS	100
D110 WRITE TEST QUESTIONS	100
D91 CONDUCT RESIDENT COURSE CLASSROOM TRAINING	90
D109 SCCRE TESTS	90
D93 COUNSEL TRAINEES ON TRAINING PROGRESS	70
D103 EVALUATE PROGRESS OF TRAINEES	60
D87 ANNOTATE TRAINING RECORDS	40
D97 DEVELOP PERFORMANCE TESTS	40
D104 EVALUATE TRAINING METHODS AND TECHNIQUES	30
E165 MAINTAIN TECHNICAL ORDER PUBLICATION FILES	20
B30 COUNSEL PERSONNEL ON PERSONAL OR MILITARY-RELATED MATTERS	20
E142 INITIATE OR REVIEW TECHNICAL ORDER SYSTEM FORMS, SUCH AS AFTO FORMS 22, 27, 32, 110, 110A, 110B, AND 131	20
E122 ANNOTATE OR INITIATE AF FORMS 1297 (TEMPORARY ISSUE RECEIPT)	20

EQUIPMENT USED

N/A

APPENDIX B

AFSC 452X3 STS ITEMS
NOT SUPPORTED BY OSR DATA

TABLE B1

STS REFERENCE/TASKS	STS PROF CODE	PERCENT MEMBERS PERFORMING						
		1ST ENL/A (N=107)	5-SKILL LEVEL/A (N=169)	1ST ENL/B (N=108)	5-SKILL LEVEL/B (N=120)	1ST ENL/C (N=172)	5-SKILL LEVEL/C (N=220)	7-SKILL LEVEL (N=242)
4e REPORT SOFTWARE DEFICIENCIES	- -							
E180 REPORT AIRCRAFT SOFTWARE DEFICIENCIES		3	3	3	3	9	8	9
E181 REPORT SOFTWARE DEFICIENCIES, OTHER THAN AIRCRAFT SOFTWARE		2	2	0	0	1	1	2
7b STATEMENT OF CHARGES	- -							
E137 INITIATE DD FORMS 362 (STATEMENT OF CHARGES FOR GOV'T PROPERTY LOST, DAMAGED, OR DESTROYED)		7	3	6	3	2	3	4
7c REPORT OF SURVEY	- -							
E132 INITIATE AF FORMS 198 (REPORT OF SURVEY FOR AIR FORCE PROPERTY)		1	2	3	1	1	3	8
7k(1) PERSONNEL	- -							
E112 ANNOTATE AF FORMS 2405 (PERSONNEL AVAILABILITY FORECAST)		0	1	1	0	1	1	5
E182 REVIEW AF FORMS 2405		0	0	1	1	0	0	1

TABLE B1 (CONTINUED)

STS REFERENCE/TASKS	STS PROF CODE	PERCENT MEMBERS PERFORMING						
		1ST ENL/A (N=107)	5-SKILL LEVEL/A (N=169)	1ST ENL/B (N=108)	5-SKILL LEVEL/B (N=120)	1ST ENL/C (N=172)	5-SKILL LEVEL/C (N=220)	7-SKILL LEVEL (N=242)
10b INSPECTION SYSTEMS	B B							
E138 INITIATE OR COMPLETE AF FORMS 2420 (QUALITY CONTROL INSPECTION SUMMARY)								
E184 REVIEW AF FORMS 2420		5 1	6 2	5 1	4 1	2 0	3 0	11 4
10d DEFICIENCY REPORTING SYSTEM	2b B							
E154 MAINTAIN DEFICIENCY, SERVICE OR STATUS REPORTS		4	3	3	3	4	5	5
11a(2)(a)1 PREFLIGHT	- -							
F220 PERFORM PREFLIGHT INSPECTIONS OF AIRCRAFT		3	1	2	0	2	0	2
11a(2)(a)3 THRU FLIGHT	- -							
F239 PERFORM THRU FLIGHT INSPECTIONS OF AIRCRAFT		2	1	3	2	0	0	3
11a(2)(a)4 BASIC POSTFLIGHT	- -							
F219 PERFORM POSTFLIGHT INSPECTIONS OF AIRCRAFT		4	2	2	0	0	0	1

TABLE B1 (CONTINUED)

STS REFERENCE/TASKS	STS PROF CODE	PERCENT MEMBERS PERFORMING						
		1ST ENL/A (N=107)	5-SKILL LEVEL/A (N=169)	1ST ENL/B (N=108)	5-SKILL LEVEL/B (N=120)	1ST ENL/C (N=172)	5-SKILL LEVEL/C (N=220)	7-SKILL LEVEL (N=242)
11a(2)(a)5 HOURLY POSTFLIGHT	- -							
F219 PERFORM POSTFLIGHT INSPECTIONS OF AIRCRAFT		4	2	0	0	2	0	1
11a(4)(c) TOW AIRCRAFT	- -							
F270 TOW AIRCRAFT		19	15	16	11	9	8	11
11a(4)(d) MOOR AIRCRAFT	- -							
F208 MOOR AIRCRAFT		2	4	3	3	3	3	3
11b(1)(b) TRAVEL PODS	- -							
F252 REMOVE OR INSTALL TRAVEL PODS		6	6	5	12	9	10	6
11b(2)(b) TRAVEL PODS	- -							
F252 REMOVE OR INSTALL TRAVEL PODS		6	6	5	12	9	10	6
11b(3) INSPECT AIRFRAME AND AIRFRAME COMPONENTS	- -							
F203 INSPECT AIRFRAME OR AIRFRAME COMPONENTS		8	11	11	15	6	7	11

TABLE B1 (CONTINUED)

STS REFERENCE/TASKS	STS PROF CODE	PERCENT MEMBERS PERFORMING						
		1ST ENL/A (N=107)	5-SKILL LEVEL/A (N=169)	1ST ENL/B (N=108)	5-SKILL LEVEL/B (N=120)	1ST ENL/C (N=172)	5-SKILL LEVEL/C (N=220)	7-SKILL LEVEL (N=242)
11c(1)(a) LANDING GEAR SYSTEM	- -							
F264 SERVICE AIRCRAFT LANDING GEAR SYSTEMS		1	1	1	0	0	0	0
11c(1)(b) BRAKES SYSTEM	- -							
F257 SERVICE AIRCRAFT BRAKE SYSTEMS		1	2	2	2	0	1	0
11c(1)(c) TIRES	- -							
F257 SERVICE AIRCRAFT TIRES		1	1	1	1	0	0	0
11c(1)(d) ARRESTING GEAR SYSTEMS	- -							
F256 SERVICE AIRCRAFT ARRESTING GEAR SYSTEMS		0	0	0	0	0	0	1
11c(2) LUBRICATE LANDING GEAR SYSTEMS	- -							
F207 LUBRICATE AIRCRAFT LANDING GEAR SYSTEMS COMPONENTS		0	0	2	0	1	0	1
11c(3)(a) WHEEL AND TIRE ASSEMBLIES	- -							
F253 REMOVE AND INSTALL AIRCRAFT WHEEL AND TIRE ASSEMBLIES		4	1	2	2	0	2	2

TABLE B1 (CONTINUED)

STS PROF CODE	1ST ENL/A (N=107)	5-SKILL LEVEL/A (N=169)	PERCENT MEMBERS PERFORMING				7-SKILL LEVEL (N=242)
			1ST ENL/B (N=108)	5-SKILL LEVEL/B (N=120)	1ST ENL/C (N=172)	5-SKILL LEVEL/C (N=220)	
11c(3)(b) BRAKE ASSEMBLIES	- -						
F244 REMOVE AND INSTALL AIRCRAFT BRAKE ASSEMBLIES	1	1	1	0	0	0	2
11c(4)(a) WHEEL AND TIRE ASSEMBLIES	- -						
F253 REMOVE AND INSTALL AIRCRAFT WHEEL AND TIRE ASSEMBLIES	4	1	2	2	0	2	2
11c(4)(b) BRAKE ASSEMBLIES	- -						
F244 REMOVE AND INSTALL AIRCRAFT BRAKE ASSEMBLIES	1	1	1	0	0	0	2
11c(5) DETERMINE SERVICEABILITY OF AIRCRAFT TIRES	- -						
F195 DETERMINE SERVICEABILITY OF AIRCRAFT TIRES	9	8	11	8	7	7	6
11c(6) INSPECT LANDING GEAR SYSTEMS	- -						
F201 INSPECT AIRCRAFT LANDING GEAR SYSTEMS	1	2	4	3	1	3	2

TABLE B1 (CONTINUED)

STS REFERENCE/TASKS	STS PROF CODE	PERCENT MEMBERS PERFORMING						
		1ST ENL/A (N=107)	5-SKILL LEVEL/A (N=169)	1ST ENL/B (N=108)	5-SKILL LEVEL/B (N=120)	1ST ENL/C (N=172)	5-SKILL LEVEL/C (N=220)	7-SKILL LEVEL (N=242)
11d(1) SERVICE OXYGEN SYSTEM	- -							
F266 SERVICE AIRCRAFT OXYGEN SYSTEMS		0	0	1	5	1	1	0
11d(2) SERVICE ENVIRONMENTAL SYSTEMS	- -							
F266 SERVICE AIRCRAFT ENVIRONMENTAL SYSTEMS		0	1	1	0	0	1	0
11d(2)(c) REMOVE LOX CONVERTER	- -							
F255 REMOVE OR INSTALL LOX CONVERTERS		0	0	0	1	0	0	1
11d(2)(d) INSTALL LOX CONVERTER	- -							
F255 REMOVE OR INSTALL LOX CONVERTERS		0	0	0	1	0	0	1
11e(2)(a) SERVICE	- -							
F202 INSPECT AIRCRAFT PNEUMATIC SYSTEMS		1	2	9	15	1	3	7
11f(1)(a) OIL SYSTEM	- -							
F261 SERVICE AIRCRAFT ENGINE SYSTEMS		0	0	1	1	0	0	0

TABLE B1 (CONTINUED)

STS REFERENCE/TASKS	STS PROF CODE	PERCENT MEMBERS PERFORMING						
		1ST ENL/A (N=107)	5-SKILL LEVEL/A (N=169)	1ST ENL/B (N=108)	5-SKILL LEVEL/B (N=120)	1ST ENL/C (N=172)	5-SKILL LEVEL/C (N=220)	7-SKILL LEVEL (N=242)
11f(1)(b) CONSTANT SPEED DRIVE	- -							
F259 SERVICE AIRCRAFT ENGINE CONSTANT SPEED DRIVES (CSD)		0	0	1	0	0	0	0
11f(1)(c) GEARBOX	- -							
F260 SERVICE AIRCRAFT ENGINE GEARBOXES		0	0	0	0	0	0	0
11f(1)(d) ACCESSORY DRIVE	- -							
F258 SERVICE AIRCRAFT ACCESSORY DRIVES		0	0	1	0	0	0	0
11f(2) REMOVE STARTER CARTRIDGES	- -							
F248 REMOVE OR INSTALL AIRCRAFT ENGINE STARTER CARTRIDGES		0	0	1	0	0	0	1
11f(3) INSTALL STARTER CARTRIDGES	- -							
F248 REMOVE OR INSTALL AIRCRAFT ENGINE STARTER CARTRIDGES		0	0	1	0	0	0	1

TABLE B1 (CONTINUED)

STS REFERENCE/TASKS	STS PROF CODE	PERCENT MEMBERS PERFORMING						
		1ST ENL/A (N=107)	5-SKILL LEVEL/A (N=169)	1ST ENL/B (N=108)	5-SKILL LEVEL/B (N=120)	1ST ENL/C (N=172)	5-SKILL LEVEL/C (N=220)	7-SKILL LEVEL (N=242)
11f(4) PERFORM GROUND OPERATION OF ENGINE	- -							
F214 PERFORM GROUND OPERATION OF AIRCRAFT ENGINES, OTHER THAN MOTORING ENGINES		2	2	8	8	0	1	3
11f(5) PERFORM GROUND OPERATION OF ENGINE	- -							
F215 PERFORM GROUND OPERATION OF AIRCRAFT MOTORING ENGINES		2	2	5	5	1	1	2
11f(6) TAKE ENGINE OIL SAMPLES	- -							
F269 TAKE ENGINE OIL SAMPLES (JOAP)		3	1	3	5	2	3	2
11f(7) PERFORM ENGINE REMOVAL PREPARATION PROCEDURES	- -							
F210 PERFORM AIRCRAFT ENGINE REMOVAL PREPARATION PROCEDURES		3	4	2	6	3	7	5
11g(4) PREPARE AIRCRAFT FOR FUEL CELL	- -							
F241 PREPARE AIRCRAFT FOR FUEL CELL		0	0	3	3	1	2	2

TABLE B1 (CONTINUED)

STS REFERENCE/TASKS	STS PROF CODE	PERCENT MEMBERS PERFORMING						
		1ST ENL/A (N=107)	5-SKILL LEVEL/A (N=169)	1ST ENL/B (N=108)	5-SKILL LEVEL/B (N=120)	1ST ENL/C (N=172)	5-SKILL LEVEL/C (N=220)	7-SKILL LEVEL (N=242)
11g(5)(a) REMOVE	- -							
F249 REMOVE OR INSTALL AIRCRAFT EXTERNAL FUEL TANKS		4	2	6	4	5	5	6
11g(5)(b) INSTALL	- -							
F249 REMOVE OR INSTALL AIRCRAFT EXTERNAL FUEL TANKS		4	2	6	4	5	5	6
11g(6) CLASSIFY FUEL LEAKS	- -							
F197 IDENTIFY OR CLASSIFY AIRCRAFT FUEL LEAKS		8	12	6	16	3	7	10
11h(2)(a) LIGHT LENSES	- -							
F251 REMOVE OR INSTALL AIRCRAFT LIGHT LENSES		3	7	5	9	7	8	9
11h(3)(a) LIGHT LENSES	- -							
F251 REMOVE OR INSTALL AIRCRAFT LIGHT LENSES		3	7	5	9	7	8	9

TABLE B1 (CONTINUED)

STS REFERENCE/TASKS	STS PROF CODE	PERCENT MEMBERS PERFORMING						
		1ST ENL/A (N=107)	5-SKILL LEVEL/A (N=169)	1ST ENL/B (N=108)	5-SKILL LEVEL/B (N=120)	1ST ENL/C (N=172)	5-SKILL LEVEL/C (N=220)	7-SKILL LEVEL (N=242)
11i EGRESS SYSTEM	- -							
F199 INSPECT AIRCRAFT EGRESS SYSTEMS		5	9	9	13	9	9	16
11j(2)(a) PERFORM PRE-USE INSPECTION	- -							
F223 PERFORM PRE-USE INSPECTIONS OF AIRCRAFT JACKS		1	1	10	11	11	12	2
11j(3)(a) PERFORM PRE-USE INSPECTION	- -							
F226 PERFORM PRE-USE INSPECTIONS OF GASEOUS OXYGEN SERVICING EQUIPMENT		1	1	2	4	4	4	2
11j(4)(a) PERFORM PRE-USE INSPECTION	- -							
F231 PERFORM PRE-USE INSPECTIONS OF LIQUID OXYGEN (LOX) SERVICING EQUIPMENT		0	1	2	2	3	2	1
11j(12)(a) PERFORM PRE-USE INSPECTION	- -							
F238 PERFORM PRE-USE INSPECTIONS OF TOW VEHICLES		3	5	2	1	4	7	10

TABLE B1 (CONTINUED)

STS REFERENCE/TASKS	STS PROF CODE	PERCENT MEMBERS PERFORMING						
		1ST ENL/A (N=107)	5-SKILL LEVEL/A (N=169)	1ST ENL/B (N=108)	5-SKILL LEVEL/B (N=120)	1ST ENL/C (N=172)	5-SKILL LEVEL/C (N=220)	7-SKILL LEVEL (N=242)
11j(14)(a) PERFORM PRE-USE INSPECTION	- -							
F234 PERFORM PRE-USE INSPECTIONS OF OIL SERVICING CARTS		0	1	1	0	1	2	2
11j(16)(a) PERFORM PRE-USE INSPECTION	- -							
F224 PERFORM PRE-USE INSPECTIONS OF BOMB LIFTS		7	10	8	6	12	19	17
11k(1) AREA TURN SUPERVISOR	- -							
F216 PERFORM INTEGRATED COMBAT TURN DUTIES		8	11	6	12	10	14	18
11k(2) COMBAT TURN MEMBER	- -							
F216 PERFORM INTEGRATED COMBAT TURN DUTIES		8	11	6	12	10	14	18
12a MAINTAIN AIRCRAFT ANALYSIS HISTORICAL RECORDS	- -							
E115 ANNOTATE AFTO FORMS 95 (SIGNIFICANT HISTORICAL DATA)		1	3	2	0	1	2	5
E150 MAINTAIN AIRCRAFT ANALYSIS HISTORICAL RECORDS		12	6	4	5	5	7	5
E157 MAINTAIN HISTORICAL TECHNICAL INSTRUCTION COMPLIANCE RECORDS		2	1	2	1	1	0	1

TABLE B1 (CONTINUED)

STS REFERENCE/TASKS	STS PROF CODE	PERCENT MEMBERS PERFORMING						
		1ST ENL/A (N=107)	5-SKILL LEVEL/A (N=169)	1ST ENL/B (N=108)	5-SKILL LEVEL/B (N=120)	1ST ENL/C (N=172)	5-SKILL LEVEL/C (N=220)	7-SKILL LEVEL (N=242)
12b SUPPORT SECTION	- -							
E168 MAINTAIN TOOL CRIBS		4	4	4	4	11	12	5
E171 PACKAGE TOOLS OR EQUIPMENT FOR SHIPMENT OR DEPLOYMENT		7	8	7	15	6	10	14
E171 PROCESS TOOLS OR EQUIPMENT FOR SHIPMENT OR DEPLOYMENT		3	2	6	6	3	7	7
12b(1) MAINTAIN TMDE (PMEL) REPORTS	- -							
E114 ANNOTATE AFTO FORMS 163 (REQUEST FOR LIMITED/SPECIAL CALIBRATION (TMDE)		0	1	2	3	1	0	2
E163 MAINTAIN SPECIAL TOOLS OR EQUIPMENT CALIBRATION RECORDS		5	2	3	4	5	6	5
E166 MAINTAIN TEST EQUIPMENT CALIBRATION OR REPAIR REPORTS		0	0	2	3	3	3	2
E186 REVIEW OR UPDATE TMDE LISTINGS		0	0	2	3	1	2	6
E187 SCHEDULE TEST EQUIPMENT FOR REPAIR OR CALIBRATION		3	1	6	6	2	2	4
12b(2) MAINTAIN TO FILES	- -							
E165 MAINTAIN TECHNICAL ORDER PUBLICATION FILES		5	7	4	4	5	10	16

TABLE B: (CONTINUED)

STS PROF CODE	STS REFERENCE/TASKS	PERCENT MEMBERS PERFORMING						
		1ST ENL/A (N=107)	5-SKILL LEVEL/A (N=169)	1ST ENL/B (N=108)	5-SKILL LEVEL/B (N=120)	1ST ENL/C (N=72)	5-SKILL LEVEL/C (N=220)	7-SKILL LEVEL (N=242)
12b(4)	ISSUE TOOLS	-	-					
E148	ISSUE TOOLS, EQUIPMENT, OR SUPPLIES	8	8	5	8	14	16	13
12b(6)	MAINTAIN CA/CRLs	-	-					
E156	MAINTAIN EQUIPMENT CONTROL LISTINGS (ECL)	3	4	2	3	4	4	6
E161	MAINTAIN PROPERTY CUSTODY AUTHORIZATION/CUSTODY RECEIPT LISTINGS (CA/CRL)	1	2	0	3	2	3	8
12c(2)	MAINTAIN DEBRIEFING FORMS	-	-					
E153	MAINTAIN DEBRIEFING FORMS	7	7	3	5	7	4	4
12d(1)	MAINTAIN DISPATCH LOG/BOARD	-	-					
E155	MAINTAIN DISPATCH LOGS OR BOARDS	15	16	13	11	10	12	16
12d(3)	MAINTAIN AIRCRAFT STATUS BOARD	-	-					
E151	MAINTAIN AIRCRAFT AND PARTS STATUS INDICATORS, SUCH AS BOARDS, GRAPHS, OR CHARTS	4	8	4	9	2	6	13

TABLE B1 (CONTINUED)

STS PROF CODE	STS REFERENCE/TASKS	PERCENT MEMBERS PERFORMING						
		1ST ENL/A (N=107)	5-SKILL LEVEL/A (N=169)	1ST ENL/B (N=108)	5-SKILL LEVEL/B (N=120)	1ST ENL/C (N=172)	5-SKILL LEVEL/C (N=220)	7-SKILL LEVEL (N=242)
-	-	-	-	-	-	-	-	-
12e(1)	DIFM MONITOR							
E113	ANNOTATE AF FORMS 2520 (REPAIR CYCLE CONTROL LOG)	1	2	1	1	1	2	5
E149	MAINTAIN AF FORMS 2005 SUSPENSE FILES	1	2	2	3	3	4	4
E178	PROCESS DUE IN FOR MAINTENANCE (DIFM) ITEMS	7	9	13	6	1	7	15
E179	PROCESS TOOLS OR EQUIPMENT FOR SHIPMENT OR DEPLOYMENT	3	2	6	6	8	10	7
E183	REVIEW AF FORMS 2413	1	2	1	0	3	7	5
E170	MONITOR SPECIAL PURPOSE RECOVERABLE AUTHORIZED							
	MAINTENANCE (SPRAM) ACCOUNTS	0	1	5	5	1	2	7
E189	VERIFY MISSION CAPABILITY (MICAP) CONDITIONS	0	1	0	1	0	1	15

30c PERFORM OPERATIONAL CHECK	- -							
H326 PERFORM OPERATIONAL CHECKS AND BIT OF DATA LINK SYSTEMS		6	5	0	1	1	1	4
30d(1) TRANSPORT	- -							
H360 TRANSPORT DATA LINK SYSTEM PODS		5	3	0	3	2	3	5

TABLE B1 (CONTINUED)

STS PROF CODE	STS ENL/A (N=107)	5-SKILL LEVEL/A (N=169)	1ST ENL/B (N=108)	5-SKILL LEVEL/B (N=120)	1ST ENL/C (N=172)	5-SKILL LEVEL/C (N=220)	7-SKILL LEVEL (N=242)
30d(2) UPLOAD	- -						
H362 UPLOAD OR DOWNLOAD DATA LINK SYSTEM PODS	6	5	1	3	3	5	5
30d(3) DOWNLOAD	- -						
H362 UPLOAD OR DOWNLOAD DATA LINK SYSTEM PODS	6	5	1	3	3	5	5
30e REMOVE SYSTEM LRU(s)	- -						
H347 REMOVE OR INSTALL DATA LINK SYSTEM LRUs	4	4	0	1	2	3	2
30e INSTALL SYSTEM LRU(s)	- -						
H347 REMOVE OR INSTALL DATA LINK SYSTEM LRUs	4	4	0	1	2	3	2